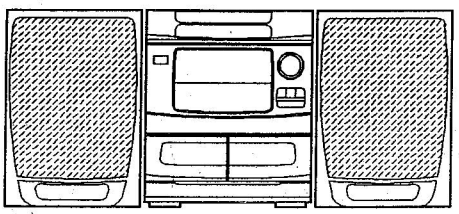
aiwa

aiwa SERVICE

# CX-NV25
# CX-NV10

SERVICE MANUAL



COMPACT DISC /
STEREO CASSETTE RECEIVER

- BASIC TAPE MECHANISM : 2ZM-3MK2 PR3
- BASIC TAPE MECHANISM : 3ZG-3 A1
- TYPE: HE,HR,HK,LH,K, EE,EZ,U(NV10)

| CD-CASSEIVER | REMOTE CONTROLLER | SPEAKER |
|---|---|---|
| CX-NV25 | RC-T504 | SX-NV30 |
| CN-NV10 | | |

S/M Code No. 09-958-106-9FE

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## ACCESSORIES / PACKAGE LIST

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

| REF. NO. | PART NO. | KANRI NO. | DESCRIPTION |
|---|---|---|---|
| 1 | 85-NE8-951-019 | | RC, RC-T504 |
| 2 | 87-006-240-019 | | AM LOOP ANT <HE,HR,HK> |
| 2 | 87-006-268-019 | | AM LOOP ANT <LH,U,EE,EZ,K> |
| 3 | 87-099-789-019 | | PLUG,ADPTR IR44<HE,LH,HR,HEB> |
| 4 | 87-043-095-019 | | 5M(SW)WIRE-ANT(S)<HE,HR,HK> |
| 5 | 87-043-106-019 | | FM,WIRE ANT (Z)<EE,EZ,K> |
| 6 | 87-043-115-01B | | ANT,FEEDER FM<EXCEPT EE,EZ,K> |
| 7 | 85-NE8-902-019 | | IB,E (EGI)-M<EE,EZ> |
| 7 | 85-NE8-903-019 | | IB,E (ESF)-M<EE,EZ,K> |
| 7 | 85-NE8-901-019 | | IB,H (ECA)-M<HE,HR,HK> |
| 7 | 85-NE8-906-019 | | IB,U(ESF)-M<LH,U> |

# SPECIFICATIONS

**Main unit CX-NV25/NV10**

**<FM tuner section>**

| | |
|---|---|
| **Tuning range** | 87.5 MHz to 108 MHz |
| **Usable sensitivity(IHF)** | 13.2 dBf |
| **Antenna terminals** | 75 ohms (unbalanced) |

**<AM / MW tuner section>**

| | |
|---|---|
| **Tuning range** | 531 kHz to 1602 kHz (9 kHz step)<br>530 kHz to 1710 kHz (10 kHz step) |
| **Usable sensitivity** | 350 μV/m |
| **Antenna** | Loop antenna |

**<SW tuner section> (HE,HR,HK)**

| | |
|---|---|
| **Tuning range** | 5.95 MHz to 17.9 MHz |
| **Antenna** | Wire antenna |

**<LW tuner section > (EE,K,EZ)**

| | |
|---|---|
| **Tuning range** | 144 kHz to 290 kHz |
| **Usable sensitivity** | 1000 μV/m |
| **Antenna** | Loop antenna |

**<Amplifier section>**

| | |
|---|---|
| **Power output** | HR,LH:<br>25 W + 25 W (Rate)<br>(6 ohms, T.H.D. 1%,1 kHz)<br>30 W + 30 W (Reference)<br>(6 ohms, T.H.D. 10%,1 kHz)<br>HE,HK:<br>30 W + 30 W<br>(6 ohm,T.H.D.10%,1kHz)<br>U:<br>FTC RULE<br>16 watts per channel,Min.RMS at 6 ohms, from 65 Hz to 12 kHz, with no more than 1% Total Harmonic Distortion<br>EE,K,EZ:<br>Reference: 25W + 25W (6 ohms, T.H.D 10%,1kHz / DIN 45324)<br>Rate: 20 W +20 W (6 ohms,T.H.D. 1%,1kHz / DIN 45500)<br>DIN MUSIC POWER:45W + 45W |
| **Total harmonic distortion** | HE,HR,HK,LH<br>0.05% (15 W, 1 kHz, 6 ohms)<br>U:<br>0.05% (8 W,1 kHz,6 ohms)<br>EE,K,EZ<br>0.05% (10 W,1kHz,6 ohms) |
| **Outputs** | HE,HR,HK.LH:<br>SUPER WOOFER: 1.4V<br>U,EE,K,EZ:<br>SUPER WOOFER: 1.2V<br>HE,HR,HK,EE,K,EZ:<br>SPEAKERS: accepts speakers of 6 ohms or more<br>PHONES (ø6.3mm stereo jack): accepts headphones of 32 ohms or more |
| **Inputs** | HE,HR,HK:<br>VIDEO / AUX: 400 mV<br>MIC 1, MIC 2: 1 mV (10 kohms)<br>U,LH,EE, K, EZ:<br>VIDEO / AUX: 400mV<br>MIC 1, MIC 2: 1.8 mV (10 kohms) |

**CASSETTE DECK SECTION**

| | |
|---|---|
| **Track format** | 4 tracks, 2 channels stereo |
| **Frequency response** | CrO2 tape: 50 Hz – 16000 Hz<br>Normal tape: 50 Hz –15000 Hz |
| **Signal-to-noise ratio** | 50 dB (CrO2 tape peak level above 400 Hz) |
| **Recording system** | AC bias |
| **Heads** | Deck 1: Playback head x 1<br>Deck 2: Recording/playback/ erase head x 1 |

**Compact disc player section**

| | |
|---|---|
| **Laser** | Semiconductor laser (λ = 780 nm) |
| **D-A converter** | 1 bit dual |
| **Signal-to noise ratio** | 85 dB (1 kHz, 0 dB) |
| **Harmonic distortion** | 0.03% (1kHz,0 dB) |
| **Wow and flutter** | Unmeasurable |

**SPEAKER SYSTEM SX-NV30**

| | |
|---|---|
| **Cabinet type** | 3 way, bass reflex (Magnetism sealed type) |
| **Speaker** | Woofer: 140 mm (5⅝ in.) cone type<br>Tweeter: 60 mm (2⅜ in.) cone type<br>Super tweeter: 20 mm (13/16 in.) ceramic type |
| **Impedance** | Speaker: 6 ohms |
| **Output sound pressure level** | 87 dB/W/m |
| **Dimensions (W x H x D)** | 206 x 302 x 230 mm<br>(8⅛ x 12 x 9⅛ in.) |
| **Weight** | 2.8 kg (6 lbs 3 oz.) |

**GENERAL**

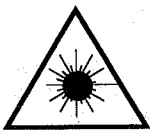
| | |
|---|---|
| **Power requirements** | HE,HR,HK,LH<br>120 / 220-240 V AC, switchable<br>50 / 60 Hz<br>U:<br>120 V 60 Hz,fixed<br>EE,K,EZ<br>230 V AC, 50 Hz |
| **Power consumption** | HE,HR,HK,LH<br>80 W<br>U:<br>55W<br>EE,K,EZ:<br>115W |
| **Dimensions of main unit (W X H XD)** | 260 x 305.5 x 339.1mm<br>(10¼ x 12⅛ x 13⅜ in.) |
| **Weight of main unit** | HE,HR,HK.LH:<br>6.3 kg (13 lbs 14 oz)<br>U:<br>5.7 kg (12 lbs 9 oz)<br>EE,K,EZ:<br>5.8 kg (12lbs 14 oz) |

• Design and specifications are subject to change without notice.

# PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

**WARNING!!**
WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.



- Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- Advarsel: Usynlig laserståling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

**VAROITUS!**
Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyt-täjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

**VARNING!**
Om apparaten används på annat sätt än vad som specificeras i denna bruksanvising, kan användaren utsättas för osynling laserstrålning, som överskrider gränsen för laserklass 1.

**CAUTION**
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

**ATTENTION**
L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

**ADVARSEL!**
Usynlig laserståling ved åbning, når sikkerhedsafbrydereer ude af funktion. Undgå udsættelse for stråling.

This Compact Disc player is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT label is located on the rear exterior.

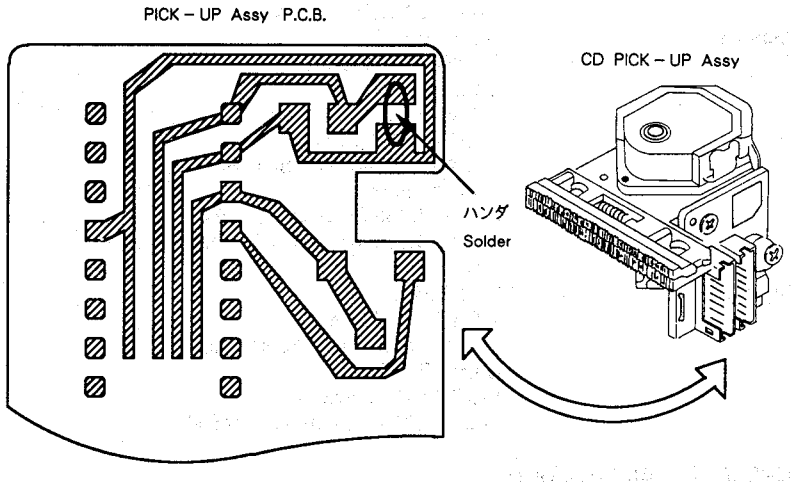
| | |
|---|---|
| CLASS 1 | LASER PRODUCT |
| KLASSE 1 | LASER PRODUKT |
| LUOKAN 1 | LASER LAITE |
| KLASS 1 | LASER APPARAT |

## Precaution to replace Optical block

## (KSS – 212A)

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

1) After the connection, remove solder shown in figure below.



# ELECTRICAL MAIN PARTS LIST

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

| REF. NO. | PART NO. | KANRI NO. | DESCRIPTION |
|---|---|---|---|
| IC | | | |
| | 87-002-407-010 | | IC,TA8191F |
| | 87-070-336-019 | | IC,TC9284BF |
| | 87-002-727-019 | | IC,NJM4558L |
| | 85-NE8-640-010 | | IC,UPD78043BGF-011 |
| | 87-070-321-019 | | IC,HC-312 |
| | 87-070-163-019 | | IC,STK405-030<U,EE,EZ,K> |
| | 87-070-267-019 | | IC,STK405-050<HE,LH,HR,HK> |
| | 87-070-121-010 | | IC,HA12185NT |
| | 87-070-305-019 | | IC,BA6897S |
| | 87-017-738-019 | | IC,NJM2068LD |
| | 87-017-787-010 | | IC,M62412P |
| | 87-001-982-019 | | IC,TA7291S |
| | 87-017-698-080 | | IC,M65843FP<HE,HR,HK> |
| | 87-070-127-019 | | IC,LC72131 |
| | 87-017-374-019 | | IC,TC4094BP |
| | 87-017-673-019 | | IC,BA3737 |
| | 87-017-714-019 | | IC,LA1836 |
| | 87-027-666-019 | | IC,TC4052BP |
| | 87-020-454-010 | | IC,DN6851 |
| TRANSISTOR | | | |
| | 87-026-463-089 | | TR,2SA933S (RS) |
| | 89-213-702-019 | | TR 2SB1370E |
| | 87-026-486-089 | | TR,DTA144TS |
| | 89-113-187-889 | | TR,2SA1318TU |
| | 87-026-610-089 | | TR,KTC3198GR |
| | 89-332-665-089 | | TR,2SC3266GR |
| | 87-026-609-089 | | TR,KTA1266GR |
| | 89-406-555-089 | | TR,2SD655E |
| | 89-109-521-089 | | TR,2SA952K |
| | 87-026-462-089 | | TR,2SC1740S (RS) |
| | 89-502-465-089 | | TR,FET 2SK246GR |
| | 89-333-317-089 | | TR,2SC3331T |
| | 89-112-965-089 | | TR,2SA1296GR |
| | 87-026-214-089 | | TR,DTA114YS |
| | 89-319-233-089 | | TR,2SC1923(O) |
| | 89-502-415-089 | | FET,2SK241GR |
| | 89-501-615-089 | | TR,2SK161-GR (TPE4) |
| | 87-026-269-089 | | TR,DTA114ES<EXCEPT LH,U> |
| | 89-320-011-089 | | TR,2SC2001K<EE,EZ,K> |
| | 89-505-446-089 | | FET,2SK544F |
| DIODE | | | |
| | 87-020-465-089 | | DIODE,ISS133 |
| | 87-017-978-089 | | DIODE,1N4003 |
| | 87-017-933-089 | | ZENER,MTZJ10D<EXCEPT U> |
| | 87-017-173-089 | | ZENER,HZ11A2L<U> |
| | 87-017-144-089 | | ZENER,HZS24-2 |
| | 87-002-225-019 | | DIODE DBF 40C-K10 |
| | 87-017-931-089 | | ZENER, MTZJ5.6B |
| | 87-017-932-089 | | ZENER, MTZJ6.2B |
| | 87-001-559-089 | | DIODE 1SS131 (T-72) |
| | 87-027-286-089 | | ZENER,HZ5C1(TA)<HE,HR,HK> |
| | 87-001-912-089 | | ZENER,UTZJ 5.1B |
| | 87-020-691-089 | | DIODE,1SS132 |
| MAIN C.B | | | |
| BPF831 | 87-030-105-010 | | FLTR,BPMB6A<EE,EZ,K> |
| C102 | 87-016-473-089 | | CAP,E 3300-35 SME |
| C102 | 87-016-473-099 | | CAP,E 3300-35 SME |
| C103 | 87-016-566-089 | | CAP,E 2200-35 |
| C103 | 87-016-566-099 | | CAP,E 2200-35 (JAMI) |
| C104 | 87-010-381-089 | | CAP,E 330-16 SME |
| C105 | 87-010-101-089 | | CAP,E 220-16 SME |
| C106 | 87-010-764-089 | | CAP,E 47-63V |
| C107 | 87-010-384-089 | | CAP,E 100-25 SME<U> |
| C107 | 87-010-383-089 | | CAP,E 33-25 SME<HE,LH,HR,HK> |
| C107 | 87-010-260-089 | | CAP,E 47-25 SME<EE,EZ,K> |
| C108 | 87-010-384-089 | | CAP,E 100-25 SME<U> |
| C108 | 87-010-260-089 | | CAP,E 47-25 SME<EXCEPT U> |
| C109 | 87-010-263-089 | | CAP,E 100-10 SME 5X11 |
| C112 | 87-010-112-089 | | CAP,E 100-16 |
| C113 | 87-010-403-089 | | CAP,E 3.3-50 SME |
| C114 | 87-010-405-089 | | CAP,E 10-50 SME<U> |
| C116 | 87-018-127-089 | | CAP,TC-U 470P-50 B |
| C201 | 87-010-403-089 | | CAP,E 3.3-50 SME |
| C202 | 87-010-403-089 | | CAP,E 3.3-50 SME |
| C203 | 87-018-197-089 | | CAP,TC-U 1800P-16 X<EXCEPT U> |
| C203 | 87-018-133-089 | | CAP,TC-U 4700P-16 X<U> |
| C204 | 87-018-197-089 | | CAP,TC-U 1800P-16 X<EXCEPT U> |
| C204 | 87-018-133-089 | | CAP,TC-U 4700P-16 X<U> |
| C205 | 87-010-400-089 | | CAP,E 0.47-50<U> |
| C205 | 87-010-402-089 | | CAP,E 2.2-50 SME<EXCEPT U> |
| C206 | 87-010-400-089 | | CAP,E 0.47-50<U> |
| C206 | 87-010-402-089 | | CAP,E 2.2-50 SME<EXCEPT U> |
| C207 | 87-010-400-089 | | CAP,E 0.47-50 SME<EXCEPT U> |
| C207 | 87-010-402-089 | | CAP,E 2.2-50 SME<U> |
| C208 | 87-010-400-089 | | CAP,E 0.47-50 SME<EXCEPT U> |
| C208 | 87-010-402-089 | | CAP,E 2.2-50 SME<U> |
| C209 | 87-010-405-089 | | CAP,E 10-50 SME<EXCEPT EE,EZ> |
| C209 | 87-010-404-089 | | CAP,E 4.7-50 SME<EE,EZ> |
| C210 | 87-010-404-089 | | CAP,E 10-50 SME<EXCEPT EE,EZ> |
| C210 | 87-010-405-089 | | CAP,E 10-50 SME<EE,EZ> |
| C213 | 87-018-141-089 | | CAP,TC-U 3.3P-50 CH |
| C214 | 87-018-141-089 | | CAP,TC-U 3.3P-50 CH |
| C217 | 87-018-214-089 | | CAP TC U 0.1-50 F |
| C218 | 87-018-214-089 | | CAP TC U 0.1-50 F |
| C219 | 87-018-205-089 | | CAP,TC-U 0.022-25 F<EE,EZ,K> |
| C220 | 87-018-205-089 | | CAP,TC-U 0.022-25 F<EE,EZ,K> |
| C221 | 87-018-134-089 | | CAP,TC-U 0.01-16 Y<EE,EZ,K> |
| C222 | 87-018-134-089 | | CAP,TC-U 0.01-16 Y<EE,EZ,K> |
| C230 | 87-010-408-089 | | CAP,E 47-50 SME |
| C231 | 87-018-208-089 | | CAP,TC-U 0.047-50 F |
| C232 | 87-010-404-089 | | CAP,E 4.7-50 SME<HE,LH,HR,HK> |
| C233 | 87-010-401-089 | | CAP,E 1-50 SME<HE,LH,HR,HK> |
| C234 | 87-010-405-089 | | CAP,E 10-50 SME<HE,LH,HR,HK> |
| C301 | 87-010-265-089 | | CAP,E 33-16 SME |
| C302 | 87-010-265-089 | | CAP,E 33-16 SME |
| C303 | 87-018-124-089 | | CAP,TC-U 270P-50 B |
| C304 | 87-018-126-089 | | CAP,TC-U 390P-50 B |
| C305 | 87-018-126-089 | | CAP,TC-U 390P-50 B |
| C306 | 87-018-124-089 | | CAP,TC-U 270P-50 B |
| C313 | 87-018-132-089 | | CAP,TC-U 2200P-16 X |
| C314 | 87-018-132-089 | | CAP,TC-U 2200P-16 X |
| C315 | 87-018-195-089 | | CAP,TC-U 1200P-16 X |
| C316 | 87-018-195-089 | | CAP,TC-U 1200P-16 X |
| C317 | 87-010-401-089 | | CAP,E 1-50 SME |
| C318 | 87-010-401-089 | | CAP,E 1-50 SME |
| C321 | 87-010-544-089 | | CAP,E 0.1-50 |
| C322 | 87-010-544-089 | | CAP,E 0.1-50 |
| C324 | 87-010-546-089 | | CAP,E 0.33-50 SME |
| C325 | 87-010-546-089 | | CAP,E 0.33-50 SME |
| C326 | 87-018-109-089 | | CAP,TC-U 22P-50 SL |
| C327 | 87-018-109-089 | | CAP,TC-U 22P-50 SL |
| C328 | 87-018-115-089 | | CAP,TC-U 47P-50 SL |
| C329 | 87-018-115-089 | | CAP,TC-U 47P-50 SL |
| C351 | 87-018-121-089 | | CAP,TC-U 150P-50 B |
| C352 | 87-018-121-089 | | CAP,TC-U 150P-50 B |
| C415 | 87-018-121-089 | | CAP,TC-U 150P-50 B |
| C416 | 87-018-121-089 | | CAP,TC-U 150P-50 B |
| C451 | 87-018-123-089 | | CAP,TC-U 220P-50 B |
| C452 | 87-018-123-089 | | CAP,TC-U 220P-50 B |
| C453 | 87-018-131-089 | | CAP,TC-U 1000P-50 B<EE,EZ,K> |
| C454 | 87-018-131-089 | | CAP,TC-U 1000P-50 B<EE,EZ,K> |
| C456 | 87-010-260-089 | | CAP,E 47-25 SME |
| C457 | 87-018-205-089 | | CAP,TC-U 0.022-25 F |

| REF. NO. | PART NO. | KANRI NO. | DESCRIPTION |
|---|---|---|---|
| C458 | 87-018-134-089 | | CAP,TC-U 0.01-16 Y |
| C459 | 87-018-131-089 | | CAP,TC-U 1000P-50 B |
| C461 | 87-018-198-089 | | CAP,TC-U 2700P-16 X |
| C462 | 87-018-198-089 | | CAP,TC-U 2700P-16 X |
| C463 | 87-018-198-089 | | CAP,TC-U 2700P-16 X |
| C519 | 87-010-405-089 | | CAP,E 10-50 SME |
| C522 | 87-018-116-089 | | CAP,TC-U 56P-50 SL |
| C523 | 87-018-134-089 | | CAP,TC-U 0.01-16 Y |
| C524 | 87-010-402-089 | | CAP,E 2.2-50 SME |
| C525 | 87-018-134-089 | | CAP,TC-U 0.01-16 Y |
| C526 | 87-010-371-089 | | CAP,E 470-6.3 |
| C531 | 87-010-545-089 | | CAP,E 0.22-50 SME |
| C532 | 87-010-263-089 | | CAP,E 100-10 SME 5X11 |
| C533 | 87-010-400-089 | | CAP,E 0.47-50 SME |
| C535 | 87-010-400-089 | | CAP,E 0.47-50 SME |
| C536 | 87-010-401-089 | | CAP,E 1-50 SME |
| C537 | 87-010-401-089 | | CAP,E 1-50 SME |
| C538 | 87-018-205-089 | | CAP,TC-U 0.022-25 F |
| C539 | 87-010-382-089 | | CAP,E 22-25 SME |
| C543 | 87-018-131-089 | | CAP,TC-U 1000P-50 B |
| C544 | 87-018-131-089 | | CAP,TC-U 1000P-50 B |
| C545 | 87-018-205-089 | | CAP,TC-U 0.022-25 F |
| C547 | 87-010-546-089 | | CAP,E 0.33-50 SME |
| C548 | 87-010-546-089 | | CAP,E 0.33-50 SME |
| C601 | 87-018-205-089 | | CAP,TC-U 0.022-25 F |
| C650 | 87-018-134-089 | | CAP,TC-U 0.01-16 Y |
| C652 | 87-018-214-089 | | CAP TC U 0.1-50 F |
| C653 | 87-018-113-089 | | CAP,TC-U 33P-50 SL<EE,EZ,K> |
| C654 | 87-018-113-089 | | CAP,TC-U 33P-50 SL<EE,EZ,K> |
| C655 | 87-018-214-089 | | CAP TC U 0.1-50 F |
| C656 | 87-018-122-089 | | CAP,TC-U 180P-50 B<EE,EZ,K> |
| C657 | 87-018-122-089 | | CAP,TC-U 180P-50 B<EE,EZ,K> |
| C658 | 87-018-134-089 | | CAP,TC-U 0.01-16 Y |
| C701 | 87-010-404-089 | | CAP,E 4.7-50 SME |
| C702 | 87-018-134-089 | | CAP,TC-U 0.01-16 Y |
| C703 | 87-018-134-089 | | CAP,TC-U 0.01-16 Y |
| C704 | 87-018-131-089 | | CAP,TC-U 1000P-50 B |
| C711 | 87-010-263-089 | | CAP,E 100-10 SME 5X11 |
| C712 | 87-010-112-089 | | CAP,E 100-16 |
| C722 | 87-018-145-089 | | CAP,TC-U 6.8P-50 CH |
| C723 | 87-018-131-089 | | CAP,TC-U 1000P-50 B |
| C725 | 87-018-131-089 | | CAP,TC-U 1000P-50 B |
| C727 | 87-018-134-089 | | CAP,TC-U 0.01-16 Y |
| C728 | 87-010-248-089 | | CAP,E 220-10 SME |
| C748 | 87-018-134-089 | | CAP,TC-U 0.01-16 Y |
| C771 | 87-010-405-089 | | CAP,E 10-50 SME |
| C772 | 87-018-208-089 | | CAP,TC-U 0.047-50 F |
| C773 | 87-018-214-089 | | CAP TC U 0.1-50 F |
| C774 | 87-010-263-089 | | CAP,E 100-10 SME 5X11 |
| C775 | 87-010-405-089 | | CAP,E 10-50 SME |
| C776 | 87-018-134-089 | | CAP,TC-U 0.01-16Y<LH,U,EE,EZ,K> |
| C777 | 87-010-400-089 | | CAP,E 0.47-50 SME |
| C778 | 87-010-401-089 | | CAP,E 1-50 SME |
| C779 | 87-010-401-089 | | CAP,E 1-50 SME |
| C780 | 87-018-134-089 | | CAP,TC-U 0.01-16 Y |
| C791 | 87-010-401-089 | | CAP,E 1-50 SME |
| C793 | 87-018-203-089 | | CAP,TC-U 8200P-16 Y |
| C794 | 87-010-260-089 | | CAP,E 47-25 SME |
| C795 | 87-018-208-089 | | CAP,TC-U 0.047-50 F |
| C796 | 87-010-403-089 | | CAP,E 3.3-50 SME |
| C799 | 87-010-405-089 | | CAP,E 10-50 SME |
| C802 | 87-018-104-089 | | CAP,TC-U 10P-50 SL<HE,HR,HK> |
| C802 | 87-018-105-089 | | CAP,TC-U 12P-50 SL<EE,EZ,K> |
| C802 | 87-018-102-089 | | CAP,TC-U 6.8P-50 SL<LH,U> |
| C804 | 87-018-102-089 | | CAP,TC-U 6.8P-50<HE,LH,HR,U,HK> |
| C805 | 87-018-097-089 | | CAP,TC-U 2.2P-50 SL<EE,EZ,K> |
| C805 | 87-018-098-089 | | CAP,TC-U 3.3P-50<HE,LH,HR,U,HK> |
| C806 | 87-018-096-089 | | CAP,TC-U 1P-50 SL |
| C807 | 87-018-106-089 | | CAP,TC-U 15P-50 SL<EE,EZ,K> |
| C807 | 87-018-100-089 | | CAP,TC-U 4.7P-50<HE,LH,HR,U,HK> |
| C808 | 87-018-119-089 | | CAP,TC-U 100P-50 B |
| C809 | 87-018-134-089 | | CAP,TC-U 0.01-16 Y |
| C810 | 87-018-134-089 | | CAP,TC-U 0.01-16 Y |
| C811 | 87-018-116-089 | | CAP,TC-U 56P-50 SL |
| C812 | 87-018-107-089 | | CAP,TC-U 18P-50 SL |
| C813 | 87-018-134-089 | | CAP,TC-U 0.01-16 Y |
| C814 | 87-018-134-089 | | CAP,TC-U 0.01-16 Y |
| C815 | 87-018-134-089 | | CAP,TC-U 0.01-16 Y |
| C817 | 87-018-134-019 | | CAP,TC-U 0.01-16 Y |
| C819 | 87-018-214-089 | | CAP TC U 0.1-50 F<EE,EZ,K> |
| C819 | 87-018-134-089 | | CAP,TC-U 0.01-16<HE,LH,HR,U,HK> |
| C820 | 87-010-260-089 | | CAP,E 47-25 SME |
| C821 | 87-018-134-089 | | CAP,TC-U 0.01-16 Y |
| C822 | 87-018-106-089 | | CAP,TC-U 15P-50 SL<EE,EZ,K> |
| C822 | 87-018-103-089 | | CAP,TC-U 8.2P-50<HE,LH,HR,U,HK> |
| C823 | 87-018-104-089 | | CAP,TC-U 10P-50 SL<EE,EZ,K> |
| C823 | 87-018-111-089 | | CAP,TC-U 27P-50 <HE,LH,HR,U,HK> |
| C830 | 87-018-134-089 | | CAP,TC-U 0.01-16Y<LH,U,EE,EZ,K> |
| C831 | 87-018-105-089 | | CAP,TC-U 12P-50 SL<EE,EZ,K> |
| C831 | 87-018-102-089 | | CAP,TC-U 6.8P-50<HE,LH,HR,U,HK> |
| C832 | 87-018-108-089 | | CAP,TC-U 20P-50 SL<EE,EZ,K> |
| C834 | 87-018-103-089 | | CAP,TC-U 8.2P-50 SL<EE,EZ,K> |
| C847 | 87-018-134-089 | | CAP,TC-U 0.01-16 Y |
| C849 | 87-018-134-089 | | CAP,TC-U 0.01-16 Y |
| C850 | 87-018-134-089 | | CAP,TC-U 0.01-16 Y |
| C851 | 87-018-111-089 | | CAP,TC-U 27P-50 <HE,LH,HR,U,HK> |
| C860 | 87-018-134-089 | | CAP,TC-U 0.01-16 Y |
| C861 | 87-018-196-089 | | CAP,TC-U1500P-16<HE,LH,HR,U,HK> |
| C861 | 87-018-197-089 | | CAP,TC-U 1800P-16 X<EE,EZ,K> |
| C862 | 87-018-209-089 | | CAP,TC-U 0.1-50 F<EE,EZ,K> |
| C941 | 87-018-149-089 | | CAP,TC-U 15P-50 CH<HE,HR,HK> |
| C942 | 87-018-104-089 | | CAP,TC-U 10P-50 SL<EE,EZ,K> |
| C943 | 87-018-134-089 | | CAP,TC-U 0.01-16 Y<HE,HR,HK> |
| C944 | 87-014-051-089 | | CAP,PP 560P-100 J<HE,HR,HK> |
| C945 | 87-018-134-089 | | CAP,TC-U 0.01-16 Y<HE,HR,HK> |
| C946 | 87-010-401-089 | | CAP,E 1-50 SME |
| C949 | 87-014-050-089 | | CAP,PP 510P-100 J<EE,EZ,K> |
| C950 | 87-014-073-089 | | CAP,PP 4700P-100 J<HE,HR,HK> |
| C951 | 87-018-134-019 | | CAP,TC-U 0.01-16 Y |
| C952 | 87-018-134-089 | | CAP,TC-U 0.01-16 Y<EXCEPT LH,U> |
| C953 | 87-018-134-089 | | CAP,TC-U 0.01-16 Y<HE,HR,HK> |
| C954 | 87-010-400-089 | | CAP,E 0.47-50 SME<HE,HR,HK> |
| C955 | 87-018-134-089 | | CAP,TC-U 0.01-16 Y |
| C956 | 87-010-263-089 | | CAP,E 100-10 SME 5X11<HE,HR,HK> |
| C957 | 87-018-107-089 | | CAP,TC-U 18P-50 SL<EE,EZ,K> |
| C958 | 87-018-134-089 | | CAP,TC-U 0.01-16 Y<EE,EZ,K> |
| C960 | 87-010-544-089 | | CAP,E 0.1-50 |
| C971 | 87-018-134-089 | | CAP,TC-U 0.01-16 Y<EE,EZ,K> |
| C972 | 87-018-214-089 | | CAP TC U 0.1-50 F |
| C973 | 87-018-134-089 | | CAP,TC-U 0.01-16 Y |
| C988 | 87-018-212-089 | | CAP,TC U 0.022-50F<HE,HR,HK> |
| C988 | 87-018-209-089 | | CAP,TC-U 0.1-50 F<LH,U,EE,EZ,K> |
| C999 | 87-018-209-089 | | CAP,TC-U 0.1-50 F<HE,HR,HK> |
| CF741 | 87-030-354-019 | | VIB,CF BFU450C<HE,HR,HK> |
| CF801 | 87-008-423-019 | | CF,SFE 10.7 MS3G-A<EE,EZ,K> |
| CF801 | 87-008-261-089 | | FLTR,SFE10.7MA5A<HE,LH,HR,U,HK> |
| CF802 | 87-008-264-019 | | FLTR,SFE 10.7MS2-A<EE,EZ,K> |
| CF802 | 87-008-261-089 | | FLTR,SFE10.7MA5A<HE,LH,HR,U,HK> |
| D801 | 87-027-900-089 | | VARI-CAP,1SV147 |
| D802 | 87-027-900-089 | | VARI-CAP,1SV147 |
| D803 | 87-027-900-089 | | VARI-CAP,1SV147 |
| D804 | 87-027-900-089 | | VARI-CAP,1SV147<EE,EZ,K> |
| J250 | 87-099-678-019 | | JACK,6.3 W/S BLK |
| J253 | 87-009-621-019 | | JACK PIN 1P BLK |
| J254 | 87-033-227-019 | | TERMINAL,SP 4P R (Z) |
| J652 | 87-099-741-019 | | JACK,PIN 2P (JT) |
| J801 | 87-033-230-019 | | TERMINAL,ANT AJ-2016<EE,EZ,K> |
| J801 | 87-033-235-019 | | TERMINAL,ANT(H)<HE,LH,HR,U,HK> |
| L201 | 87-005-366-019 | | COIL, 1UH<EE,EZ,K> |
| L202 | 87-005-366-019 | | COIL, 1UH<EE,EZ,K> |

| REF. NO. | PART NO. | KANRI NO. | DESCRIPTION |
|---|---|---|---|
| L403 | 87-005-525-089 | | COIL,22MH-J |
| L404 | 87-005-525-089 | | COIL,22MH-J |
| L451 | 87-007-342-019 | | COIL,OSC 85K BIAS |
| L741 | 87-006-259-019 | | COIL,FM DET |
| L742 | 81-631-612-019 | | CFMT 450A<HE,HR,HK> |
| L742 | 82-NT1-659-019 | | FLTR,CFAZ-450 2NT<LH,U,EE,EZ,K> |
| L770 | 87-005-849-089 | | COIL,10UH (CECS) |
| L801 | 87-006-263-019 | | COIL,ANTFM 3/4TS,L4 |
| L802 | 87-006-243-019 | | COIL,ANT FM2-3/4TS,L4 |
| L803 | 87-006-262-019 | | COIL,RF FM3-1/2T,L4 |
| L804 | 87-006-246-019 | | COIL,RF FM3-1/2TS,L4 |
| L805 | 87-005-847-089 | | COIL,2.2UH (CECS) |
| L806 | 87-005-849-089 | | COIL,10UH (CECS) |
| L807 | 87-007-259-019 | | COIL, FM OSC(7K) N |
| L831 | 87-006-245-019 | | COIL,RF FM4TSR,L5<EE,EZ,K> |
| L832 | 87-005-847-089 | | COIL,2.2UH (CECS) |
| L941 | 87-006-320-019 | | COIL,ANT LW(SG1)<EE,EZ,K> |
| L941 | 87-006-319-019 | | COIL,ANT SW(SG1)<HE,HR,HK> |
| L942 | 87-007-338-019 | | COIL,OSC LW(SG1)<EE,EZ,K> |
| L942 | 87-007-337-019 | | COIL,OSC SW(SG1)<HE,HR,HK> |
| L943 | 87-005-372-089 | | COIL,S 1MH<HE,HR,HK> |
| L944 | 87-005-372-089 | | COIL,S 1MH<HE,HR,HK> |
| L982 | 85-NF7-618-019 | | AM PACK 1,(SG1)<LH,U> |
| L982 | 85-NF7-619-019 | | AM PACK 2,(SG1)<EE,EZ,K> |
| L982 | 85-NF7-620-019 | | AM PACK 3,(SG1)<HE,HR,HK> |
| R105 | 87-022-050-089 | | RESIS METAL 1W-0.22J |
| R106 | 87-022-050-089 | | RESIS METAL 1W-0.22J |
| R114 | 87-022-391-089 | | RES, M/F 0.47-1W<U> |
| R229 | 87-022-184-089 | | RES METAL 0.33-1W<EE,EZ,K> |
| R229 | 87-022-050-089 | | RES METAL 1W-0.22J<HE,LH,HR,HK> |
| R230 | 87-022-184-089 | | RES METAL 0.33-1W<EE,EZ,K> |
| R230 | 87-022-050-089 | | RES METAL 1W-0.22J<HE,LH,HR,HK> |
| SFR301 | 87-024-177-089 | | SFR,220K DIA6 V<EE,EZ,K> |
| SFR302 | 87-024-177-089 | | SFR,220K DIA6 V<EE,EZ,K> |
| SFR451 | 87-024-175-089 | | SFR,47K DIA6 V |
| SFR452 | 87-024-175-089 | | SFR,47K DIA6 V |
| SFR722 | 87-024-171-089 | | SFR,4.7K DIA6 V |
| TC721 | 87-011-253-089 | | TRIMER,30P LAR |
| TC801 | 87-011-252-089 | | TRIMMER 10P LAR |
| TC802 | 87-011-252-089 | | TRIMMER 10P LAR |
| TC803 | 87-011-252-089 | | TRIMMER 10P LAR<EE,EZ,K> |
| TC941 | 87-011-254-089 | | TRIMER, 20P LAR<HE,HR,HK> |
| TC942 | 87-011-253-089 | | TRIMER,30P LAR<EXCEPT LH,U> |
| W101 | 83-NEG-679-019 | | F-CABEL,5P-2.5 |
| X703 | 84-508-618-019 | | VIB,CER CSB 456 F15 |
| X721 | 87-030-372-019 | | VIB, XTAL 7.2MHZ |

FRONT C.B

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|---|---|---|---|
| | 82-NF7-210-019 | | GUIDE, FL |
| C220 | 87-010-404-049 | | CAP,E 4.7-50 SME |
| C221 | 87-010-404-049 | | CAP,E 4.7-50 SME |
| C222 | 87-010-408-049 | | CAP,E 47-50 SME |
| C223 | 87-010-405-049 | | CAP,E 10-50 SME |
| C224 | 87-010-401-049 | | CAP,E 1-50 SME |
| C225 | 87-010-263-049 | | CAP,E 100-10 |
| C226 | 87-010-401-049 | | CAP,E 1-50 SME |
| C227 | 87-010-248-049 | | CAP,E 220-10 SME |
| C228 | 87-018-134-089 | | CAP,TC-U 0.01-16 Y |
| C229 | 87-018-127-089 | | CAP,TC-U 470P-50 B |
| C401 | 87-010-545-049 | | CAP,E 0.22-50 SME |
| C402 | 87-018-131-089 | | CAP,TC-U 1000P-50 B |
| C403 | 87-018-113-089 | | CAP,TC-U 33P-50 SL |
| C404 | 87-018-113-089 | | CAP,TC-U 33P-50 SL |
| C405 | 87-018-150-089 | | CAP,TC-U 18P-50 CH |
| C508 | 87-010-384-049 | | CAP,E 100-25 SME |
| C600 | 87-010-544-049 | | CAP,E 0.1-50 SME |
| C601 | 87-018-119-089 | | CAP,TC-U 100P-50B<LH,U,EE,EZ,K> |
| C601 | 87-018-118-089 | | CAP,TC-U 82P-50 B<HE,HR,HK> |
| C602 | 87-010-544-049 | | CAP,E 0.1-50 SME |
| C604 | 87-018-214-089 | | CAP TC U 0.1-50 F |
| C607 | 87-010-401-049 | | CAP,E 1-50 SME<HE,HR,HK> |
| C608 | 87-010-401-049 | | CAP,E 1-50 SME<HE,HR,HK> |
| C615 | 87-010-401-049 | | CAP,E 1-50 SME |
| C618 | 87-010-260-049 | | CAP,E 47-25 SME |
| C620 | 87-010-405-049 | | CAP,E 10-50 SME<HE,HR,HK> |
| C620 | 87-010-260-049 | | CAP,E 47-25 SME<LH,U,EE,EZ,K> |
| C630 | 87-010-263-049 | | CAP,E 100-10<LH,U,EE,EZ,K> |
| C630 | 87-010-248-049 | | CAP,E 220-10 SME<HE,HR,HK> |
| C641 | 87-018-214-089 | | CAP TC U 0.1-50 F |
| C651 | 87-010-401-049 | | CAP,E 1-50 SME |
| C700 | 87-010-544-089 | | CAP,E 0.1-50<HE,HR,HK> |
| C701 | 87-018-132-089 | | CAP,TC-U 2200P-16 X<HE,HR,HK> |
| C702 | 87-018-134-089 | | CAP,TC-U 0.01-16 Y<HE,HR,HK> |
| C703 | 87-010-544-049 | | CAP,E 0.1-50 SME<HE,HR,HK> |
| C706 | 87-018-132-089 | | CAP,TC-U 2200P-16 X<HE,HR,HK> |
| C707 | 87-018-134-089 | | CAP,TC-U 0.01-16 Y<HE,HR,HK> |
| C708 | 87-010-544-089 | | CAP,E 0.1-50<HE,HR,HK> |
| C709 | 87-010-260-089 | | CAP,E 47-25 SME<HE,HR,HK> |
| C710 | 87-018-129-089 | | CAP,TC-U 680P-50 B<HE,HR,HK> |
| C711 | 87-018-129-089 | | CAP,TC-U 680P-50 B<HE,HR,HK> |
| C712 | 87-010-263-049 | | CAP,E 100-10<HE,HR,HK> |
| C714 | 87-010-545-089 | | CAP,E 0.22-50 SME<HE,HR,HK> |
| C715 | 87-018-133-089 | | CAP,TC-U 4700P-16 X<HE,HR,HK> |
| C801 | 87-018-119-089 | | CAP,TC-U 100P-50 B<EE,EZ,K> |
| C802 | 87-018-122-089 | | CAP,TC-U 180P-50 B<EE,EZ,K> |
| C803 | 87-018-122-089 | | CAP,TC-U 180P-50 B<EE,EZ,K> |
| FL101 | 83-NEG-632-019 | | FL 8-BT-163GK |
| J600 | 82-NF7-630-019 | | JACK,3.5 MO |
| J601 | 82-NF7-630-019 | | JACK,3.5 MO |
| L700 | 87-005-454-089 | | COIL,680UH FLR50 K<HE,HR,HK> |
| S303 | 87-036-215-089 | | SW,TACT EVQ21404M |
| S304 | 87-036-215-089 | | SW,TACT EVQ21404M |
| S305 | 87-036-215-089 | | SW,TACT EVQ21404M |
| S306 | 87-036-215-089 | | SW,TACT EVQ21404M |
| S307 | 87-036-215-089 | | SW,TACT EVQ21404M |
| S308 | 87-036-215-089 | | SW,TACT EVQ21404M |
| S309 | 87-036-215-089 | | SW,TACT EVQ21404M |
| S310 | 87-036-215-089 | | SW,TACT EVQ21404M |
| S311 | 87-036-215-089 | | SW,TACT EVQ21404M |
| S312 | 87-036-215-089 | | SW,TACT EVQ21404M |
| S313 | 87-036-215-089 | | SW,TACT EVQ21404M |
| S314 | 87-036-215-089 | | SW,TACT EVQ21404M |
| S315 | 87-036-215-089 | | SW,TACT EVQ21404M |
| S316 | 87-036-215-089 | | SW,TACT EVQ21404M |
| S317 | 87-036-215-089 | | SW,TACT EVQ21404M |
| S318 | 87-036-215-089 | | SW,TACT EVQ21404M |
| S319 | 87-036-215-089 | | SW,TACT EVQ21404M |
| S320 | 87-036-215-089 | | SW,TACT EVQ21404M |
| S321 | 87-036-215-089 | | SW,TACT EVQ21404M |
| S322 | 87-036-215-089 | | SW,TACT EVQ21404M |
| S323 | 87-036-215-089 | | SW,TACT EVQ21404M |
| S324 | 87-036-215-089 | | SW,TACT EVQ21404M |
| VR600 | 83-NM1-627-019 | | VR,10KB RK11K1130<HE,HR,HK> |
| VR601 | 81-MX4-637-019 | | VR 10KA RK11K1130 |
| X201 | 87-030-416-089 | | VIB,CER FCR4.19M5 |

MVR C.B

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|---|---|---|---|
| C652 | 87-010-401-049 | | CAP,E 1-50 SME |
| C800 | 87-018-205-089 | | CAP,TC-U 0.022-25 F |
| MVR801 | 81-MX4-635-019 | | VR,50KBX2 RK16812 MG |

CD C.B

| | | | |
|---|---|---|---|
| C001 | 87-010-382-089 | | CAP,E 22-25 SME |
| C002 | 87-018-134-089 | | CAP,TC-U 0.01-16 Y |
| C003 | 87-010-263-089 | | CAP,E 100-10 SME 5X11 |
| C004 | 87-010-401-089 | | CAP,E 1-50 SME |
| C005 | 87-018-140-089 | | CAP,TC-U 2.2P-50 CH |

| REF. NO. | PART NO. | KANRI NO. | DESCRIPTION |
|---|---|---|---|
| C007 | 87-018-113-089 | | CAP,TC-U 33P-50 SL |
| C008 | 87-018-119-089 | | CAP,TC-U 100P-50 B |
| C010 | 87-010-545-089 | | CAP,E 0.22-50 SME |
| C011 | 87-010-265-089 | | CAP,E 33-16 SME |
| C013 | 87-018-134-089 | | CAP,TC-U 0.01-16 Y |
| C014 | 87-010-248-089 | | CAP,E 220-10 SME |
| C015 | 87-010-374-089 | | CAP,E 47-10 |
| C016 | 87-010-403-089 | | CAP,E 3.3-50 SME |
| C021 | 87-018-117-089 | | CAP,TC-U 68P-50 SL |
| C022 | 87-018-201-089 | | CAP,TC-U 5600P-16 X |
| C023 | 87-010-263-089 | | CAP,E 100-10 SME 5X11 |
| C024 | 87-018-134-089 | | CAP,TC-U 0.01-16 Y |
| C101 | 87-018-134-089 | | CAP,TC-U 0.01-16 Y |
| C102 | 87-018-134-089 | | CAP,TC-U 0.01-16 Y |
| C103 | 87-010-374-089 | | CAP,E 47-10 |
| C104 | 87-010-374-089 | | CAP,E 47-10 |
| C106 | 87-018-134-089 | | CAP,TC-U 0.01-16 Y |
| C107 | 87-010-404-089 | | CAP,E 4.7-50 SME |
| C108 | 87-018-134-089 | | CAP,TC-U 0.01-16 Y |
| C109 | 87-010-248-089 | | CAP,E 220-10 SME |
| C110 | 87-010-263-089 | | CAP,E 100-10 SME 5X11 |
| C111 | 87-018-131-089 | | CAP,TC-U 1000P-50 B |
| C114 | 87-010-248-089 | | CAP,E 220-10 SME |
| C115 | 87-018-134-089 | | CAP,TC-U 0.01-16 Y |
| C116 | 87-018-134-089 | | CAP,TC-U 0.01-16 Y |
| C117 | 87-018-119-089 | | CAP,TC-U 100P-50 B |
| C120 | 87-018-109-089 | | CAP,TC-U 22P-50 SL |
| C121 | 87-018-109-089 | | CAP,TC-U 22P-50 SL |
| C123 | 87-018-134-089 | | CAP,TC-U 0.01-16 Y |
| C125 | 87-010-401-089 | | CAP,E 1-50 SME |
| C201 | 87-018-115-089 | | CAP,TC-U 47P-50 SL |
| C202 | 87-018-115-089 | | CAP,TC-U 47P-50 SL |
| C203 | 87-018-118-089 | | CAP,TC-U 82P-50 B |
| C204 | 87-018-118-089 | | CAP,TC-U 82P-50 B |
| C205 | 87-018-118-089 | | CAP,TC-U 82P-50 B |
| C206 | 87-018-118-089 | | CAP,TC-U 82P-50 B |
| C207 | 87-018-120-089 | | CAP,TC-U 120P-50 B |
| C208 | 87-018-120-089 | | CAP,TC-U 120P-50 B |
| C209 | 87-018-120-089 | | CAP,TC-U 120P-50 B |
| C210 | 87-018-120-089 | | CAP,TC-U 120P-50 B |
| C211 | 87-010-403-089 | | CAP,E 3.3-50 SME |
| C212 | 87-010-403-089 | | CAP,E 3.3-50 SME |
| C213 | 87-018-133-089 | | CAP,TC-U 4700P-16 X |
| C214 | 87-018-133-089 | | CAP,TC-U 4700P-16 X |
| C231 | 87-010-221-089 | | CAP,E 470-10 |
| C232 | 87-010-263-089 | | CAP,E 100-10 SME 5X11 |
| C302 | 87-010-404-089 | | CAP,E 4.7-50 SME |
| C501 | 87-018-134-089 | | CAP,TC-U 0.01-16 Y |
| C502 | 87-010-221-089 | | CAP,E 470-10 |
| C503 | 87-010-263-089 | | CAP,E 100-10 SME 5X11 |
| C504 | 87-018-134-089 | | CAP,TC-U 0.01-16 Y |
| C505 | 87-018-134-089 | | CAP,TC-U 0.01-16 Y |
| C506 | 87-010-221-089 | | CAP,E 470-10 |
| C601 | 87-018-134-089 | | CAP,TC-U 0.01-16 Y |
| C602 | 87-010-381-089 | | CAP,E 330-16 SME |
| C702 | 87-018-119-089 | | CAP,TC-U 100P-50 B |
| C703 | 87-018-119-089 | | CAP,TC-U 100P-50 B |
| C704 | 87-018-115-089 | | CAP,TC-U 47P-50 SL |
| C707 | 87-018-131-089 | | CAP,TC-U 1000P-50 B |
| FT102 | 85-NE8-657-019 | | CABLE,FFC 10P-CD |
| FT103 | 85-NE8-656-019 | | CABLE FFC 6P-CD |
| L002 | 87-005-730-089 | | COIL,10UH J SP02 |
| L301 | 87-005-730-089 | | COIL,10UH J SP02 |
| SFR001 | 87-024-176-089 | | SFR,100K DIA6 V |
| SFR002 | 87-024-171-089 | | SFR,4.7K DIA6 V |
| X101 | 87-030-221-089 | | CERALOCK 16.93MHZ |

DECK C.B

| REF. NO. | PART NO. | KANRI NO. | DESCRIPTION |
|---|---|---|---|
| FT101 | 85-NE8-654-019 | | CABLE,FFC 15P ES |
| SFR1 | 87-024-581-010 | | SFR,3K DIA 6H |
| SOL1 | 82-ZM1-618-310 | | SOL ASSY,27 |
| SOL2 | 82-ZM1-626-010 | | SOL,ASSY,27K |
| FT101 | 85-NE8-654-019 | | CABLE,FFC 15P ES |
| SW1 | 87-036-378-010 | | SW,PUSH 1-1-1 SH2 |
| SW2 | 87-036-378-010 | | SW,PUSH 1-1-1 SH2 |
| SW3 | 87-036-378-010 | | SW,PUSH 1-1-1 SH2 |
| SW4 | 87-036-378-010 | | SW,PUSH 1-1-1 SH2 |
| SW5 | 87-036-378-010 | | SW,PUSH 1-1-1 SH2 |
| SW6 | 87-036-378-010 | | SW,PUSH 1-1-1 SH2 |
| SW7 | 87-036-378-010 | | SW,PUSH 1-1-1 SH2 |
| SW8 | 87-036-0378-010 | | SW,PUSH 1-1-1 SH2 |

AC1 C.B

| REF. NO. | PART NO. | KANRI NO. | DESCRIPTION |
|---|---|---|---|
| ⚠F101 | 87-035-412-019 | | FUSE T1.25A 250V UL<U> |
| ⚠F101 | 87-035-363-019 | | FUSE,1.25A 250V E<HE,LH,HR,HK> |
| ⚠F101 | 87-035-359-019 | | FUSE,500MA 250V T E<EE,EZ,K> |
| ⚠H101 | 87-033-213-089 | | CLAMP FUSE SMK |
| ⚠H102 | 87-033-213-089 | | CLAMP FUSE SMK |
| ⚠PT101 | 82-NF7-624-019 | | PT,2NF7 HE<HE,HR,HK> |
| ⚠PT101 | 85-NE8-605-019 | | PT,5NE-8 LH<LH> |
| ⚠PT101 | 85-NE8-602-019 | | PT,5NE-8 U<U> |
| ⚠PT101 | 83-NE2-611-019 | | PT,EKZ (EI-66)<EE,EZ,K> |
| ⚠SW101 | 87-036-388-010 | | SW,SL 1-2-2<HE,LH,HR,HK,> |
| ⚠T101 | 82-304-743-019 | | TERMINAL,1P |
| ⚠T102 | 82-304-743-019 | | TERMINAL,1P |

AC2 C.B

HEAD-1 C.B

HEAD-2 C.B

MOTOR-1 C.B

| REF. NO. | PART NO. | KANRI NO. | DESCRIPTION |
|---|---|---|---|
| M20 | 87-045-356-019 | | MOT,RF-310TA 30 |
| M21 | 87-045-358-019 | | MOT,RF-310TA 43 |
| SW1 | 87-036-340-019 | | SW,LEAF LSA-1121 |

MOTOR-2 C.B

| REF. NO. | PART NO. | KANRI NO. | DESCRIPTION |
|---|---|---|---|
| M22 | 87-045-305-019 | | MOTOR,RF-500TB |
| SW2 | 87-036-110-019 | | SW,PUSH SPPB 62 |
| SW3 | 87-036-110-019 | | SW,PUSH SPPB 62 |

# TRANSISTOR ILLUSTRATION

E C B

2SA952 2SC3331
2SA1296 2SC1923
2SA1318 2SD655
2SC2001 KTA1266
2SC3266 KTC3198

E C B

2SK246

E C B

2SA933
2SC1740
DTA114YS
DTA144TS
DTA114ES

D S G

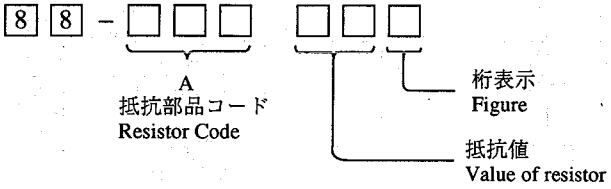
2SK544
2SK161
2SK241

B C E

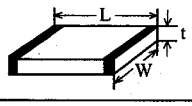
2SB1370

○ チップ抵抗部品コード／CHIP RESISTOR PART CODE

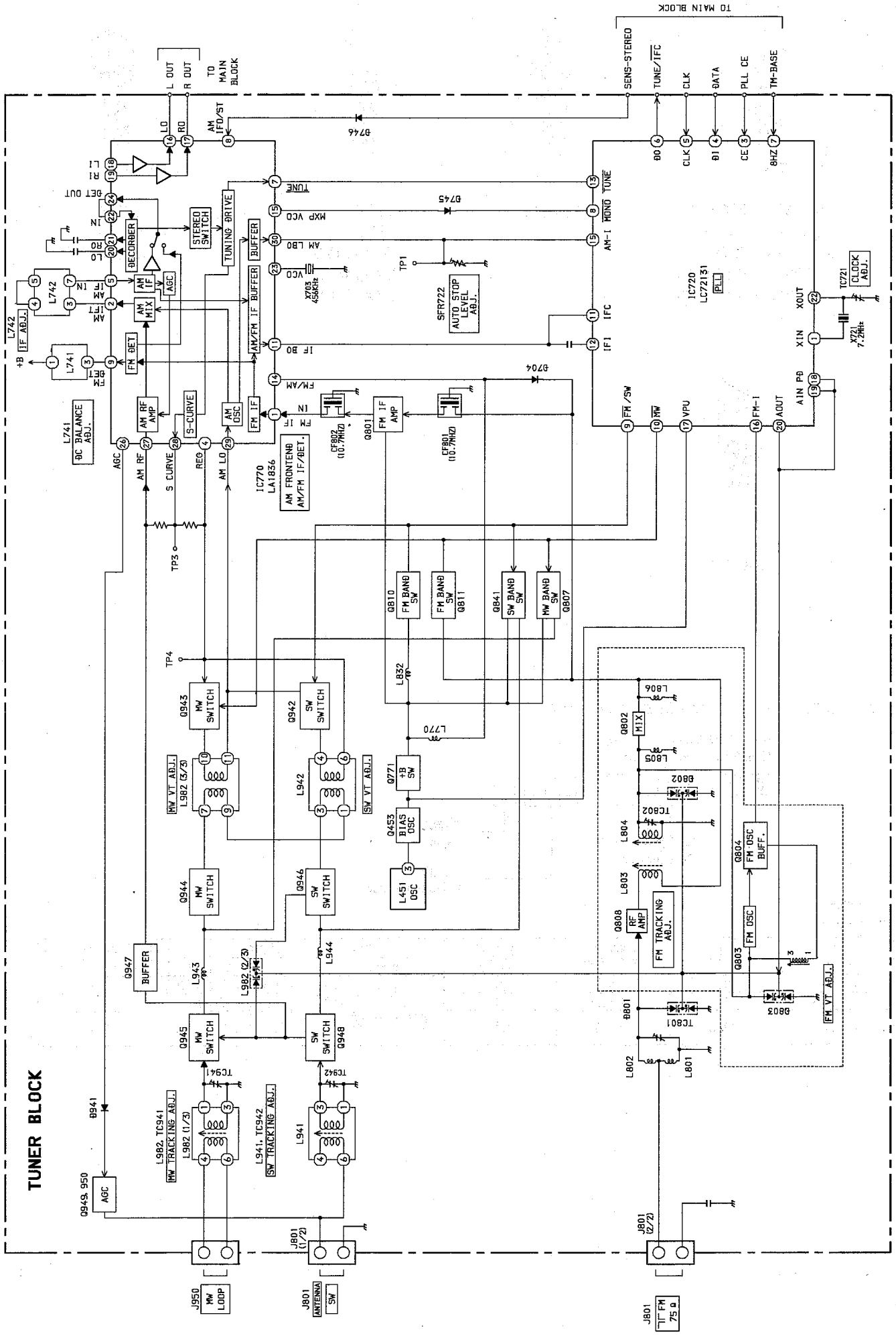
チップ抵抗部品コードの成り立ち
Chip Resistor Part Coading



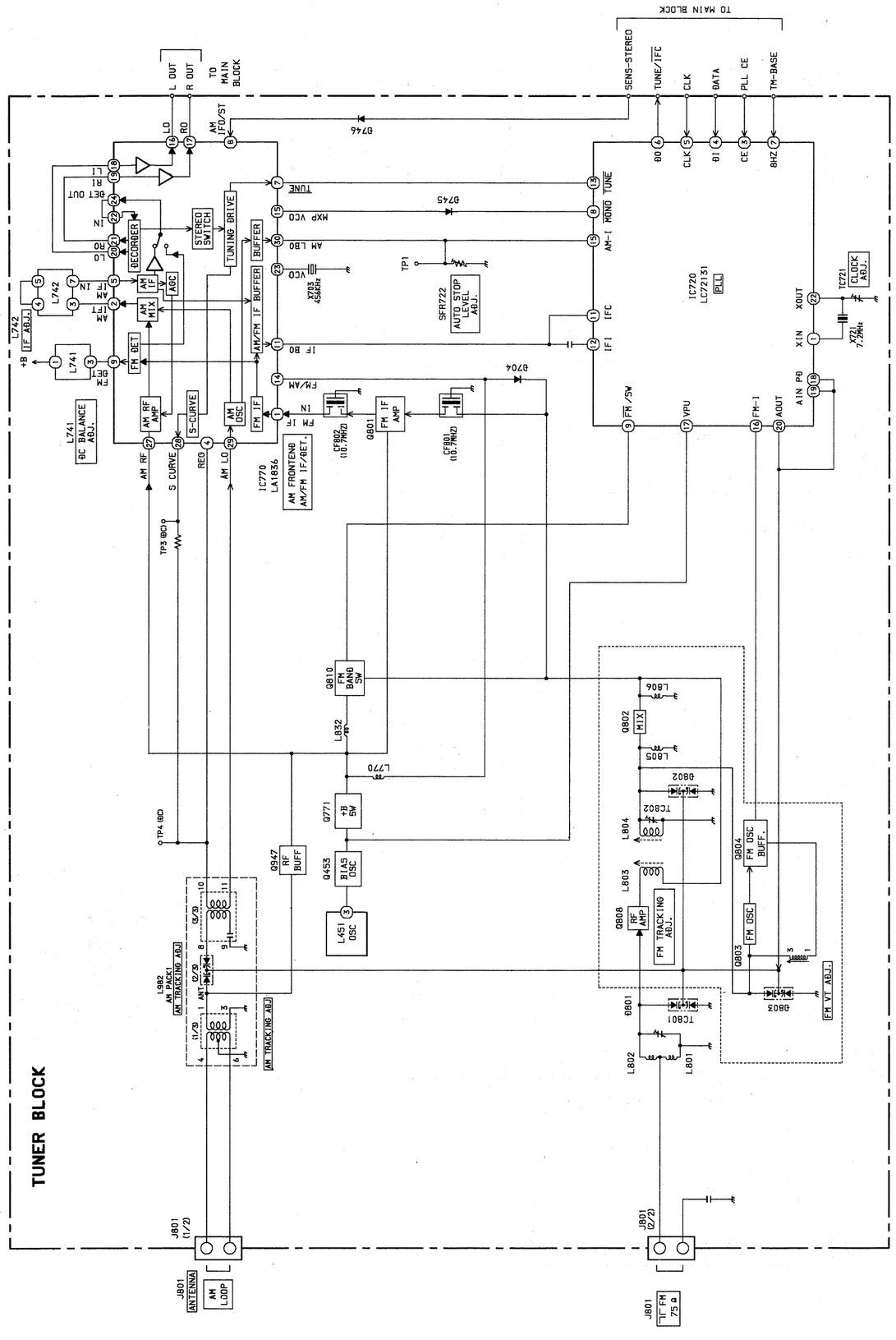

チップ抵抗
Chip resistor

| Wattage<br>容量 | Type<br>種類 | Tolerance<br>許容誤差 | Symbol<br>記号 | Dimensions／寸法 (mm) | | | | Resistor Code: A<br>抵抗コード ：A |
|---|---|---|---|---|---|---|---|---|
| | | | | Form／外形 | L | W | t | |
| 1／32W | 1608 | ±5% | CJ |  | 1.6 | 0.8 | 0.35 | 108 |
| 1／10W | 2125 | ±5% | CJ | | 2 | 1.25 | 1.45 | 118 |
| 1／8W | 3216 | ±5% | CJ | | 3.2 | 1.6 | 0.5<br>～0.7 | 128 |

# BLOCK DIAGRAM – 1 ( HE,HR,HK )

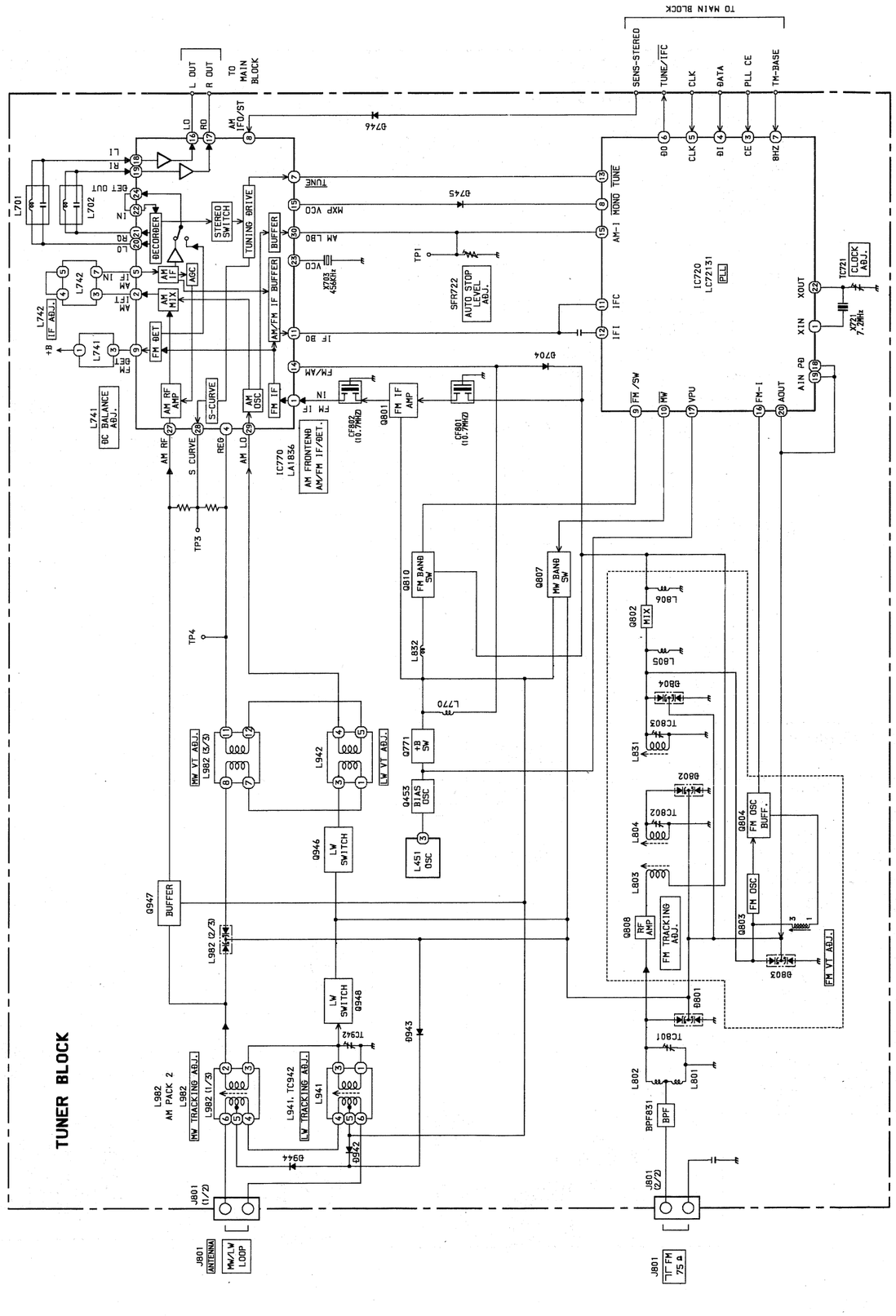


## BLOCK DIAGRAM – 2 ( U,LH )

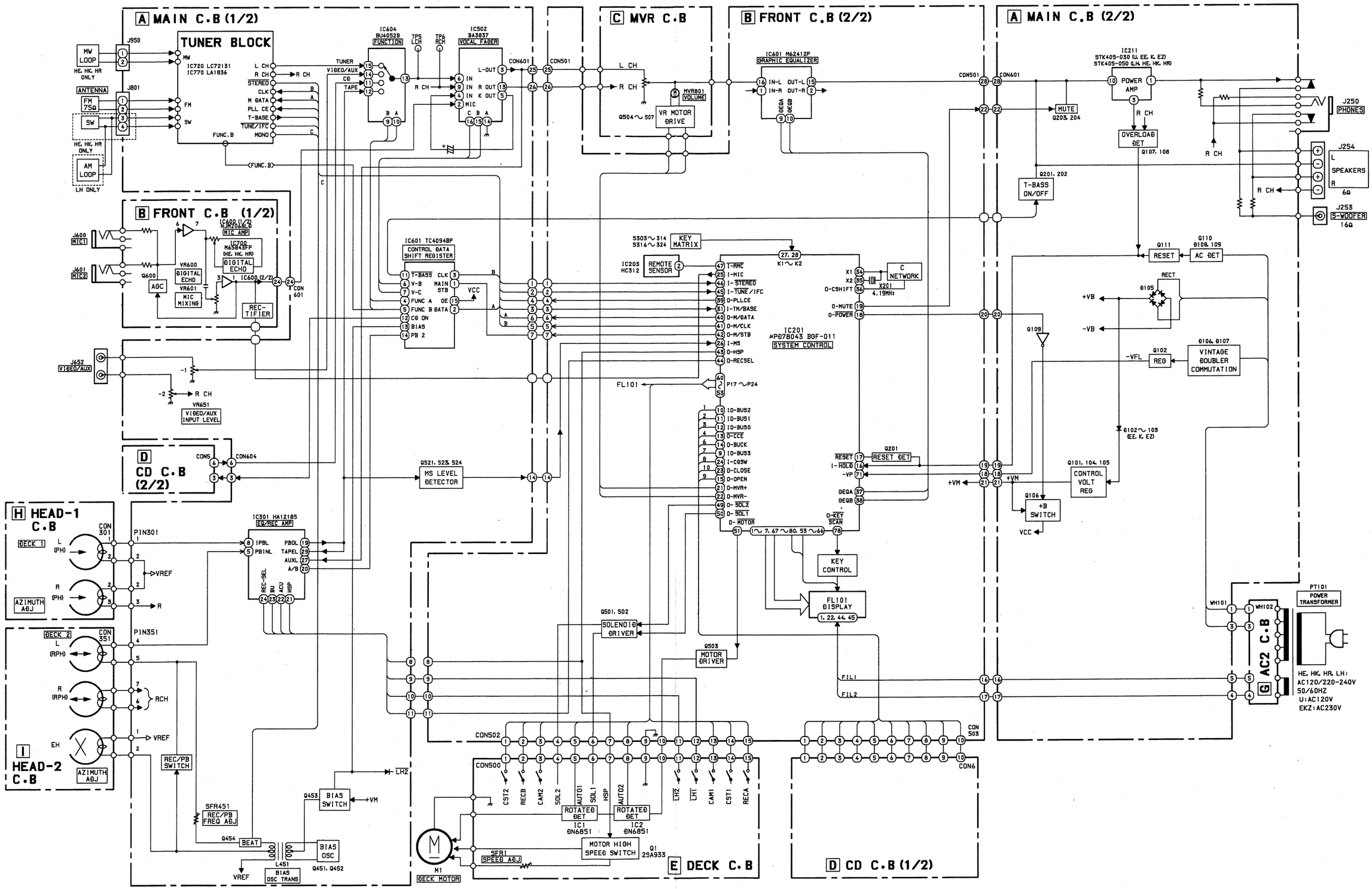


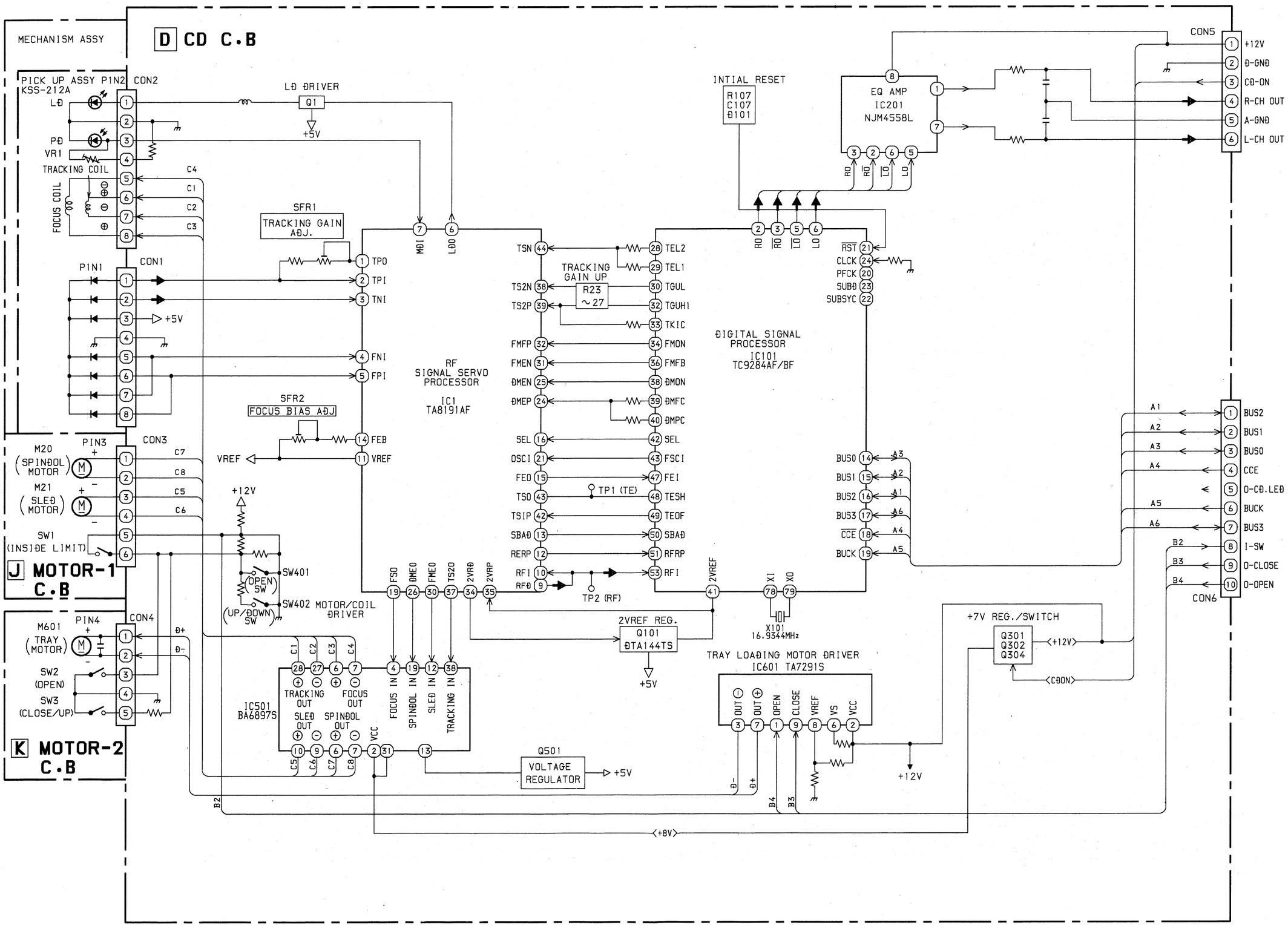



## BLOCK DIAGRAM – 3 ( EE,K,EZ )



# BLOCK DIAGRAM – 4 ( MAIN / FRONT )




D CD C.B
MECHANISM ASSY
PICK UP ASSY P1N2 KSS-212A
CON2
LD
PD
VR1
TRACKING COIL
FOCUS COIL
C4
C1
C2
C3
LD DRIVER
Q1
+5V
SFR1
TRACKING GAIN ADJ.
SFR2
FOCUS BIAS ADJ
P1N1
CON1
TPO
TPI
TNI
FNI
FPI
RF SIGNAL SERVO PROCESSOR
IC1
TA8191AF
TSN
TS2N
TS2P
FMFP
FMEN
DMEN
DMEP
SEL
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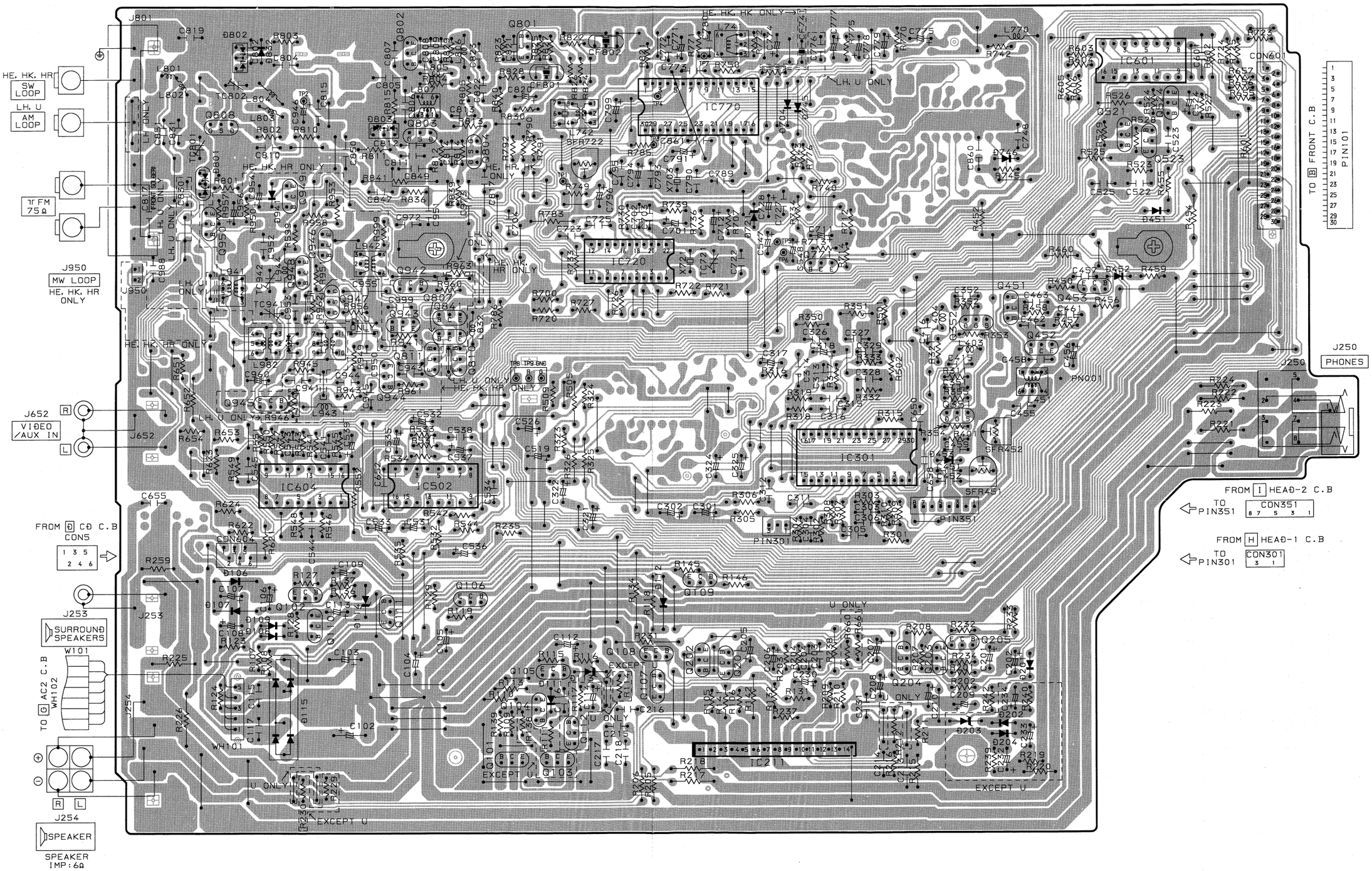
FEO
TSO
TSIP
SBAD
RERP
RFI
RFD
TEL2
TEL1
TGUL
TGUH1
TKIC
FMON
FMFB
DMON
DMFC
DMPC
SEL
FSCI
FEI
TESH
TEOF
SBAD
RFRP
RFI
TRACKING GAIN UP
R23 ~27
TP1 (TE)
TP2 (RF)
INTIAL RESET
R107
C107
D101
EQ AMP
IC201
NJM4558L
RO
RO
LO
LO
DIGITAL SIGNAL PROCESSOR
IC101
TC9284AF/BF
RST
CLCK
PFCK
SUBD
SUBSYC
BUS0
BUS1
BUS2
BUS3
CCE
BUCK
CON5
+12V
D-GND
CD-ON
R-CH OUT
A-GND
L-CH OUT
CON6
BUS2
BUS1
BUS0
CCE
O-CD.LED
BUCK
BUS3
I-SW
O-CLOSE
O-OPEN
M20 (SPINDOL MOTOR)
M21 (SLED MOTOR)
PIN3
CON3
C7
C8
C5
C6
SW1 (INSIDE LIMIT)
J MOTOR-1 C.B
+12V
SW401 (OPEN SW)
SW402 (UP/DOWN SW)
MOTOR/COIL DRIVER
M601 (TRAY MOTOR)
PIN4
CON4
D+
D-
SW2 (OPEN)
SW3 (CLOSE/UP)
K MOTOR-2 C.B
IC501 BA6897S
TRACKING OUT
FOCUS OUT
SLED OUT
SPINDOL OUT
VCC
FOCUS IN
SPINDOL IN
SLED IN
TRACKING IN
FSO
DMEO
FMEO
TS2O
2VRB
2VRP
2VREF
X1
XO
X101 16.9344MHz
2VREF REG.
Q101 DTA144TS
+5V
TRAY LOADING MOTOR DRIVER IC601 TA7291S
OUT
OUT
OPEN
CLOSE
VREF
VS
VCC
+7V REG./SWITCH
Q301 Q302 Q304
+12V
CDON
Q501
VOLTAGE REGULATOR
+5V
+8V

1 2 3 4 5 6 7 8 9 10 11 12 13 14

A B C D E F G H I J

## A MAINC.B


HE, HK, HR SW LOOP
LH, U AM LOOP
IF FM 75Ω
J950 MW LOOP HE, HK, HR ONLY
J652 VIDEO /AUX IN
FROM D CD C.B CON5
J253 SURROUND SPEAKERS
TO G AC2 C.B WH102 W101
J254 SPEAKER
SPEAKER IMP:6Ω
TO B FRONT C.B PIN101
J250 PHONES
FROM I HEAD-2 C.B TO PIN351 CON351
FROM H HEAD-1 C.B TO PIN301 CON301
IC770
IC720
IC604
IC502
IC301
IC211
IC601
Q801
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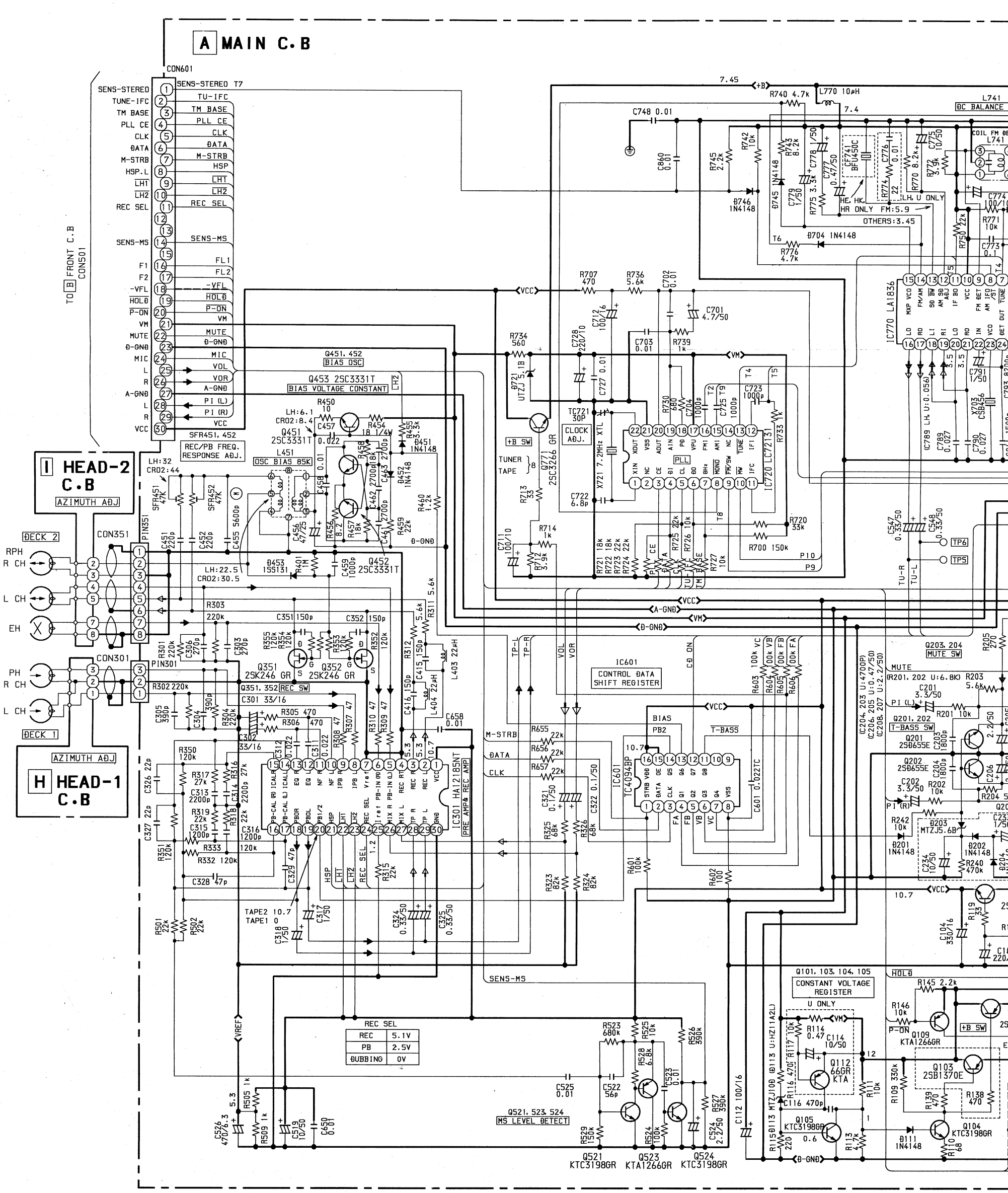
A MAIN C.B
CON601
SENS-STEREO
TUNE-IFC
TM BASE
PLL CE
CLK
ĐATA
M-STRB
HSP.L
LH1
LH2
REC SEL
SENS-MS
F1
F2
-VFL
HOLĐ
P-ON
VM
MUTE
Đ-GNĐ
MIC
L
R
A-GNĐ
PI (L)
PI (R)
VCC
TO B FRONT C.B
CON501
SFR451, 452
REC/PB FREQ. RESPONSE AĐJ.
I HEAD-2 C.B
AZIMUTH AĐJ
H HEAD-1 C.B
AZIMUTH AĐJ
ĐECK 2
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CON351
CON301
RPH R CH
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PIN351
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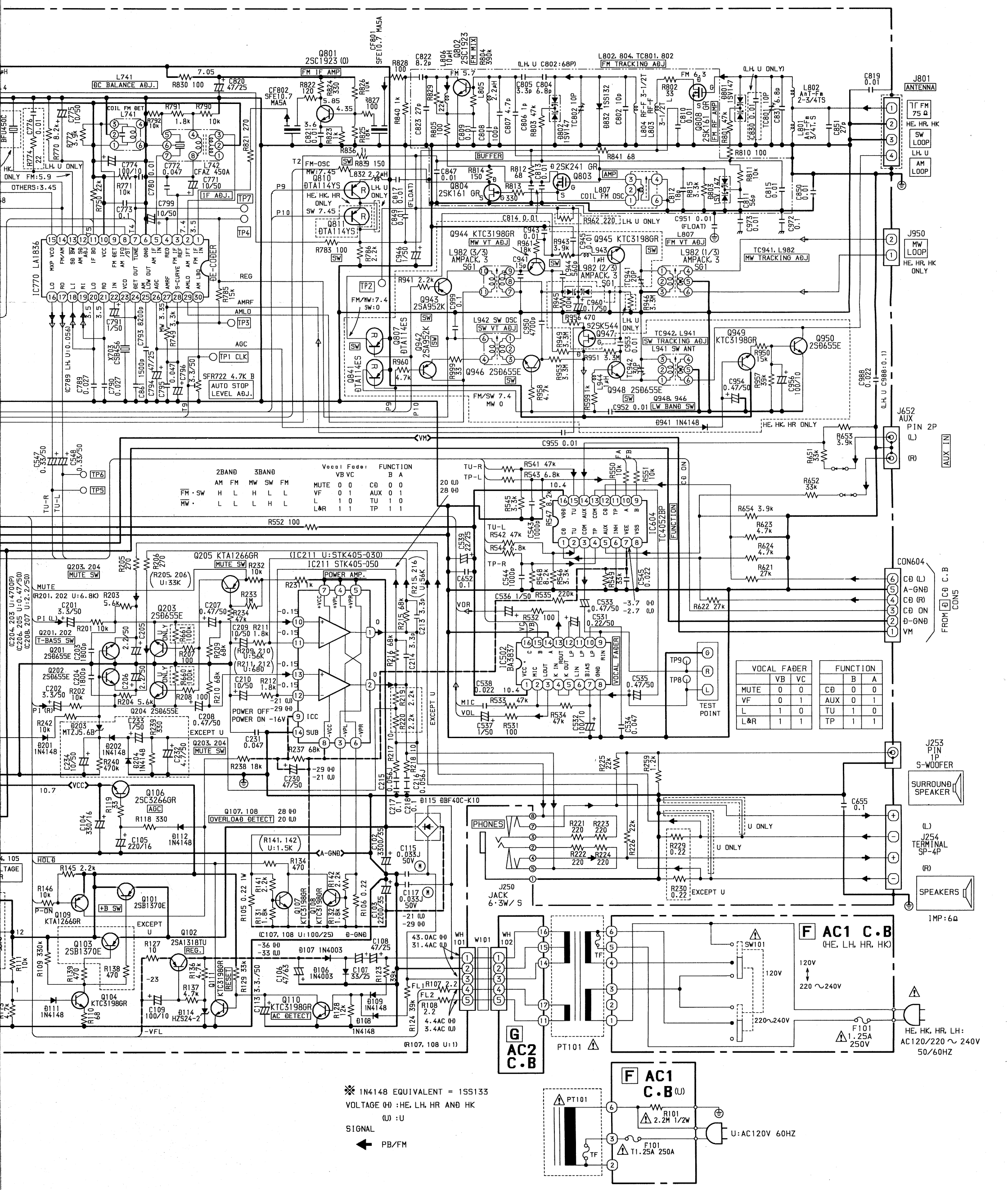
Q451, 452 BIAS OSC
Q453 2SC3331T BIAS VOLTAGE CONSTANT
Q451 2SC3331T
Q452 2SC3331T
Đ453 1SS131
L451 OSC BIAS 85K
Q351 2SK246 GR
Q352 2SK246 GR
Q351, 352 REC SW
IC301 HAI2185NT PRE AMP& REC AMP
TAPE2 10.7
TAPE1 0
+B SW
TUNER TAPE
Q771 2SC3266 GR
CLOCK AĐJ.
X721 7.2MHz XTL
TC721 30P
IC720 LC72131
PLL
IC601 CONTROL ĐATA SHIFT REGISTER
IC601 TC4094BP
BIAS
PB2
T-BASS
C-Đ ON
IC770 LA1836
FM/AM
SD BW
AM SD
AĐJ
IF BD
FM DET
AM /5T
DET OUT
TUNE
Q203, 204 MUTE SW
MUTE
(R201, 202 U:6.8K)
Q201, 202 T-BASS SW
Q201 2SĐ655E
Q202 2SĐ655E
Đ203 MTZJ5.6B
Đ201 1N4148
Đ202 1N4148
Đ111 1N4148
Đ746 1N4148
Đ745 1N4148
Đ704 1N4148
Đ721 UTZJ 5.1B
Đ451 1N4148
Đ452 1N4148
Đ113 MTZJ10Đ (Đ113 U:HZ11A2LJ)
Q101, 103, 104, 105 CONSTANT VOLTAGE REGISTER
U ONLY
Q112 66GR KTA
Q105 KTC3198GR
Q109 KTA1266GR
Q103 2SB1370E
Q104 KTC3198GR
Q521 KTC3198GR
Q523 KTA1266GR
Q524 KTC3198GR
Q521, 523, 524 MS LEVEL ĐETECT
REC SEL
REC 5.1V
PB 2.5V
ĐUBBING 0V
L741 ĐC BALANCE
COIL FM ĐET
HE, HK, HR ONLY FM:5.9
OTHERS:3.45
LH, U ONLY
T6
TP6
TP5
TU-R
TU-L
P10
P9
VCC
VM
A-GNĐ
Đ-GNĐ
VREF
SENS-MS
HOLĐ
+B SW
P-ON




| 2BAND | | 3BAND | | |
|---|---|---|---|---|
| | AM | FM | MW | SW | FM |
| FM · SW | H | L | H | L | L |
| MW · | L | L | L | H | L |

| Vocal Fader | VB | VC |
|---|---|---|
| MUTE | 0 | 0 |
| VF | 0 | 1 |
| L | 1 | 0 |
| L&R | 1 | 1 |

| FUNCTION | B | A |
|---|---|---|
| CD | 0 | 0 |
| AUX | 0 | 1 |
| TU | 1 | 0 |
| TP | 1 | 1 |

| VOCAL FADER | VB | VC |
|---|---|---|
| MUTE | 0 | 0 |
| VF | 0 | 1 |
| L | 1 | 0 |
| L&R | 1 | 1 |

| FUNCTION | B | A |
|---|---|---|
| CD | 0 | 0 |
| AUX | 0 | 1 |
| TU | 1 | 0 |
| TP | 1 | 1 |

※ 1N4148 EQUIVALENT = 1SS133

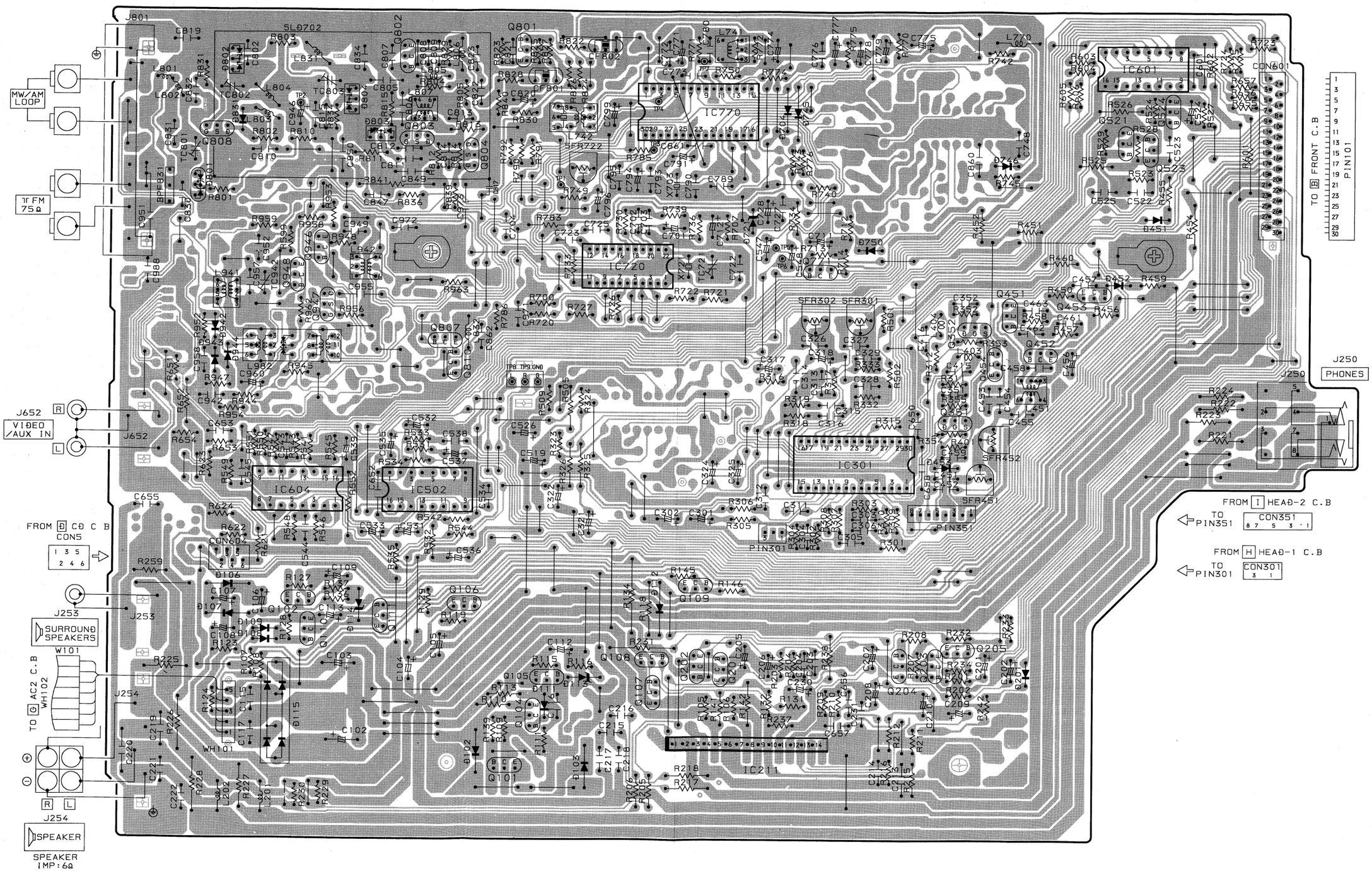
VOLTAGE (H) :HE, LH, HR AND HK

(U) :U

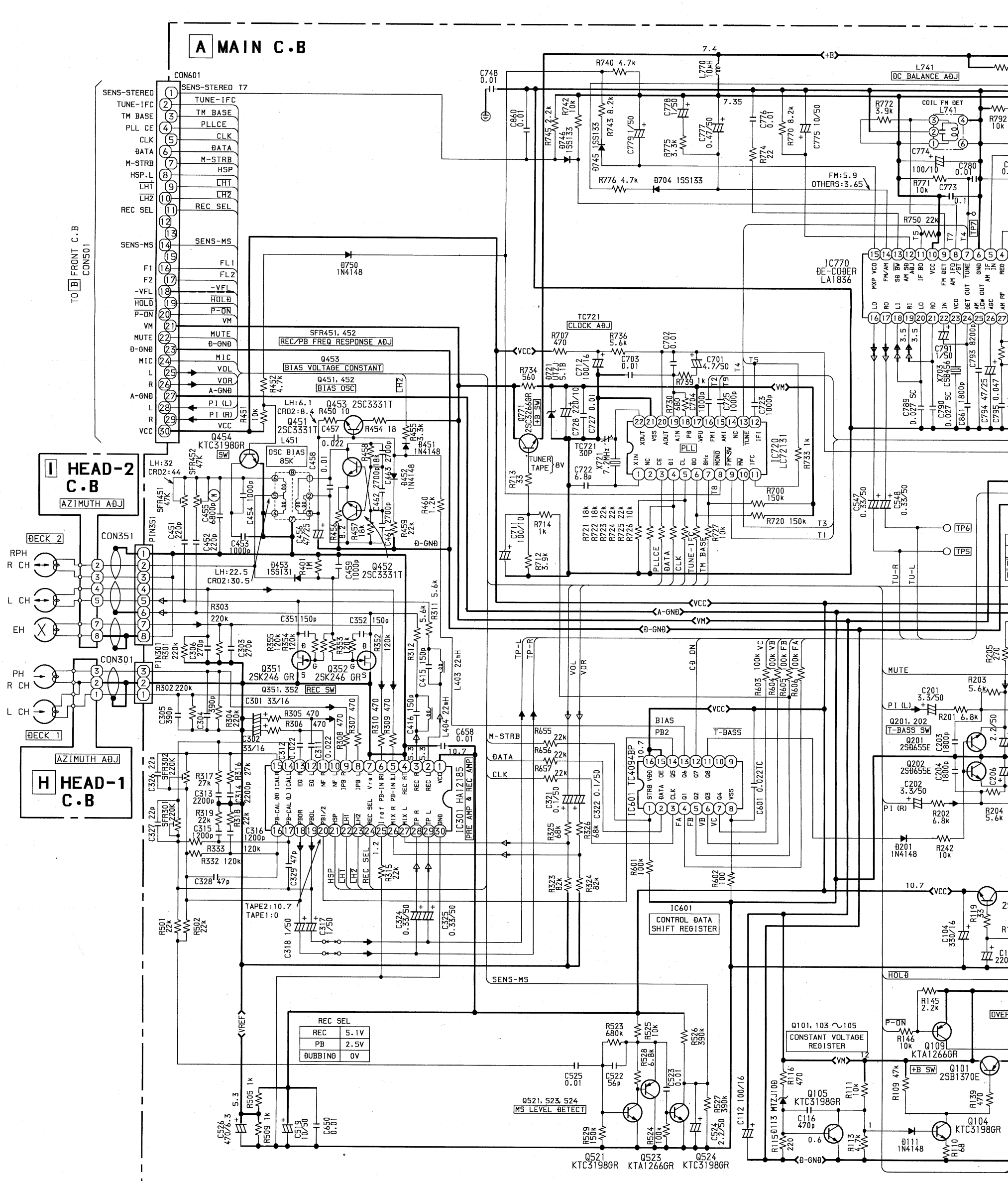
SIGNAL

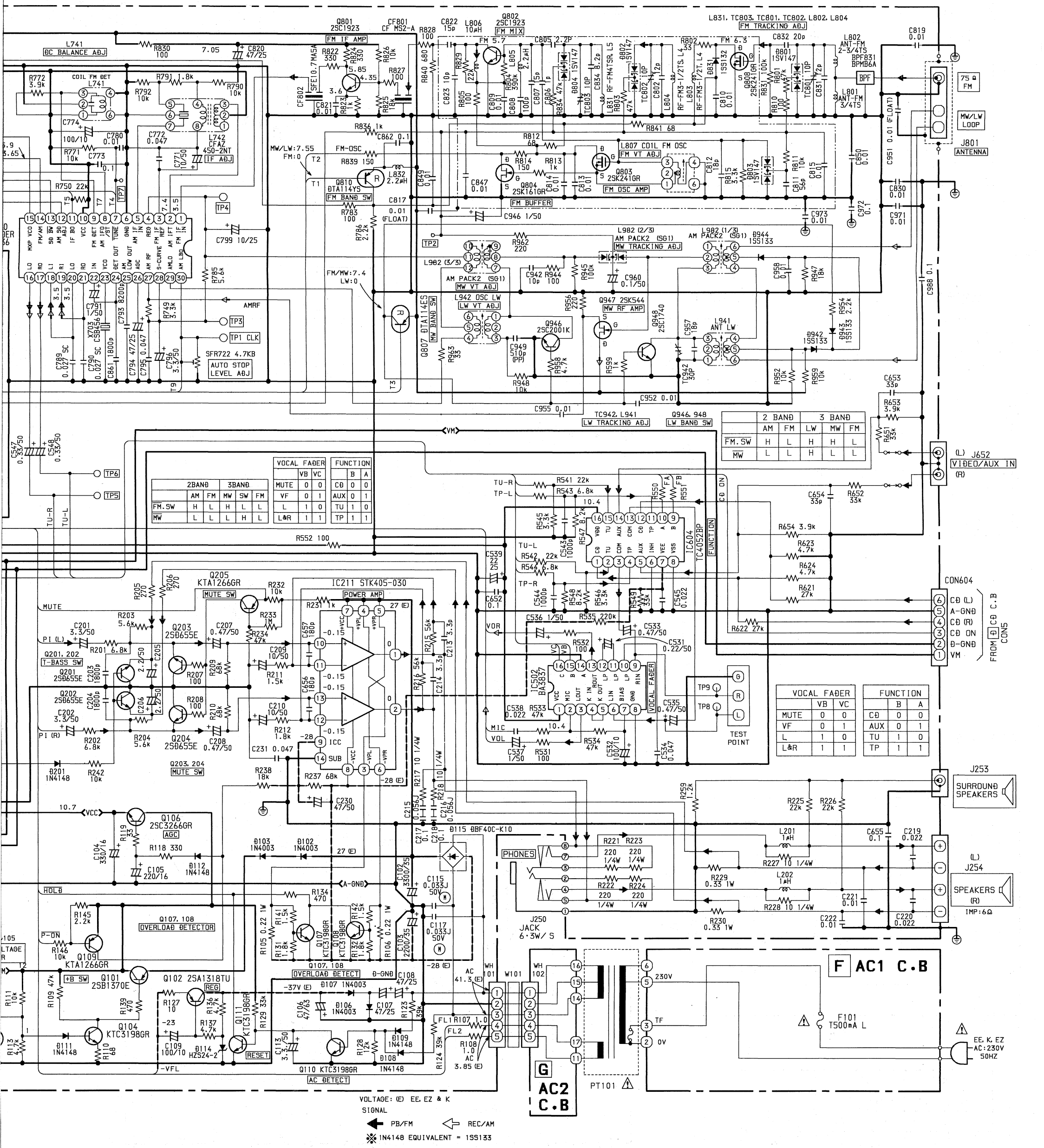
◀ PB/FM

# A MAIN C.B


J801
MW/AM LOOP
IF FM 75Ω
J652
VIDEO /AUX IN
J652
FROM D CD C B
CON5
J253
J253
SURROUND SPEAKERS
W101
TO G AC2 C.B
WH102
WH101
J254
SPEAKER
SPEAKER IMP:6Ω
IC770
IC720
IC604
IC502
IC301
IC211
IC601
Q801
Q808
Q803
Q804
Q807
Q810
Q106
Q109
Q108
Q105
Q104
Q107
Q101
Q202
Q205
Q204
Q451
Q452
Q453
Q352
Q351
Q521
Q523
Q525
D746
D750
D451
D106
D107
D109
D102
D103
D111
D115
D114
D112
D113
SFR722
SFR302
SFR301
SFR452
SFR451
PIN301
PIN351
CON601
CON607
CON301
CON351
J250
PHONES
TO D FRONT C.B
PIN101
FROM I HEAD-2 C.B
TO PIN351
FROM H HEAD-1 C.B
TO PIN301

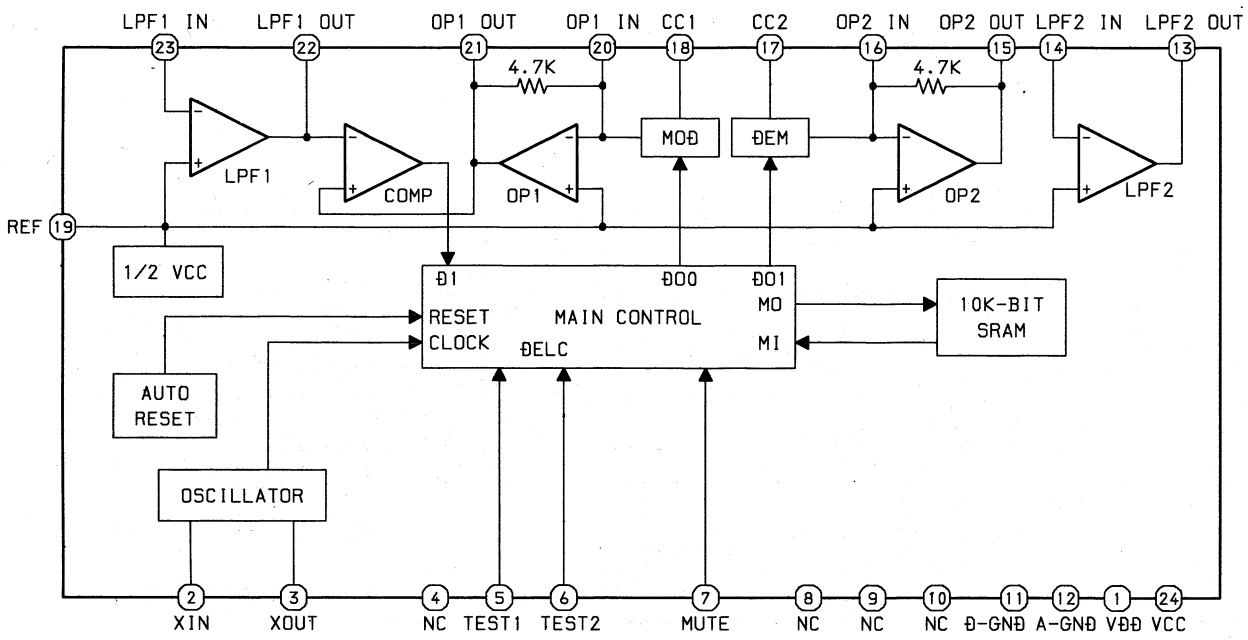
# SCHEMATIC DIAGRAM – 2 ( EE,K,EZ )



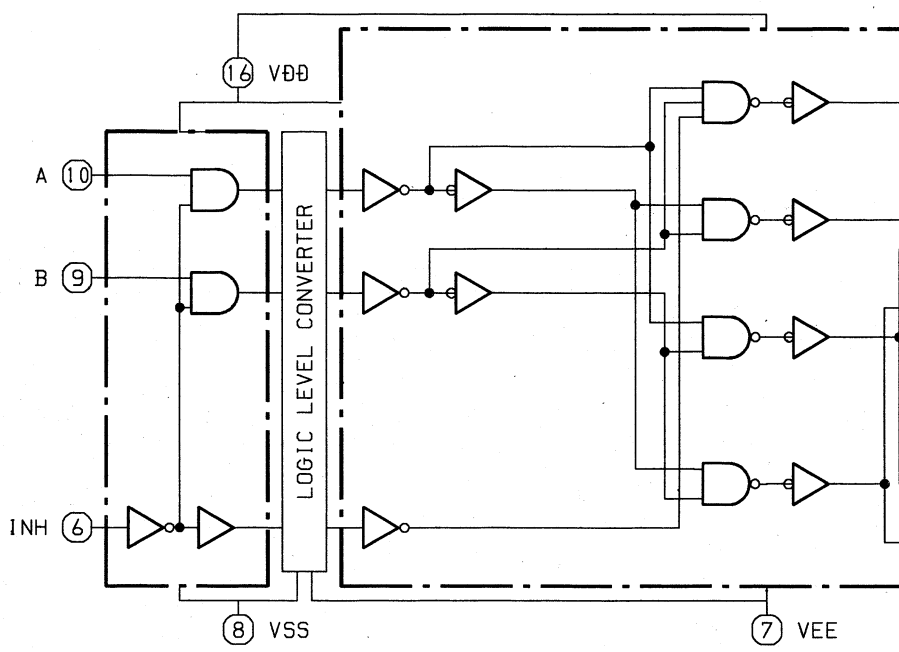

L741 ÐC BALANCE AÐJ
Q801 2SC1923 FM IF AMP
CF801 CF MS2-A
Q802 2SC1923 FM MIX
L831, TC803, TC801, TC802, L802, L804 FM TRACKING AÐJ
L802 ANT-FM 2-3/4TS BPF831 BPMB6A
L801 ANT-FM 3/4TS
BPF
75 Ω FM
MW/LW LOOP
J801 ANTENNA
COIL FM ÐET L741
L742 CFAZ 450-2NT IF AÐJ
Q810 ÐTA114YS FM BAND SW
FM-OSC
MW/LW:7.55 FM:0
L807 CD1L FM OSC FM VT AÐJ
Q803 2SK241GR FM OSC AMP
Q804 2SK161GR FM BUFFER
FM 5.7
FM 6.3
Q808 2SK241GR
TP2
TP3
TP4
TP5
TP6
TP7
TP1 CLK
SFR722 4.7KB AUTO STOP LEVEL AÐJ
AMRF
L982 (2/3) AM PACK2 (SG1) MW TRACKING AÐJ
L982 (3/3) AM PACK2 (SG1) MW VT AÐJ
L982 (1/3) AM PACK2 (SG1) Ð944 1SS133
Q807 ÐTA114ES MW BAND SW
L942 OSC LW LW VT AÐJ
Q946 2SC2001K
Q947 2SK544 MW RF AMP
Q948 2SC1740
L941 ANT LW
Ð942 1SS133
Ð943 1SS133
TC942, L941 LW TRACKING AÐJ
Q946, 948 LW BAND SW
2 BAND Ð 3 BAND Ð
AM FM LW MW FM
FM.SW H L H H L
MW L L H L L
2BAND Ð 3BAND Ð
AM FM MW SW FM
FM.SW H L H L L
MW L L L H L
VOCAL FAÐER
VB VC
MUTE 0 0
VF 0 1
L 1 0
L&R 1 1
FUNCTION
B A
CÐ 0 0
AUX 0 1
TU 1 0
TP 1 1
VOCAL FAÐER
VB VC
MUTE 0 0
VF 0 1
L 1 0
L&R 1 1
FUNCTION
B A
CÐ 0 0
AUX 0 1
TU 1 0
TP 1 1
TEST POINT
IC4052BP FUNCTION
IC502 BA3837 VOCAL FAÐER
CÐ ON
TU-R
TP-L
TU-L
TP-R
VOR
MIC
VOL
CON604
CÐ (L)
A-GNÐ
CÐ (R)
CÐ ON
Ð-GNÐ
VM
FROM Ð CÐ C.B CON5
(L) J652 VIÐEO/AUX IN (R)
J253 SURROUNÐ SPEAKERS
(L) J254 SPEAKERS (R) IMP:6Ω
J250 JACK 6·3W/S
PHONES
Q205 KTA1266GR MUTE SW
IC211 STK405-030 POWER AMP
Q203 2SÐ655E
Q201, 202 T-BASS SW
Q201 2SÐ655E
Q202 2SÐ655E
Q204 2SÐ655E
Q203, 204 MUTE SW
Ð201 1N4148
Q106 2SC3266GR AGC
Ð103 1N4003
Ð102 1N4003
Ð115 ÐBF40C-K10
Ð112 1N4148
Q107, 108 OVERLOAÐ ÐETECTOR
P-ON
Q109 KTA1266GR
Q101 2SB1370E
+B SW
Q102 2SA1318TU REG
Q104 KTC3198GR
Ð111 1N4148
Q107 KTC3198GR
Q108 KTC3198GR
Q111 KTC3198GR RESET
Ð114 HZS24-2
Ð106 1N4003
Ð107 1N4003
Ð109 1N4148
Ð108 1N4148
Q110 KTC3198GR AC ÐETECT
Ð-GNÐ
A-GNÐ
HOLÐ
-VFL
-37V (E)
W101
WH 101
WH 102
F AC1 C.B
230V
TF
0V
F101 T500mA L
EE, K, EZ AC:230V 50HZ
PT101
G AC2 C.B
VOLTAGE: (E) EE, EZ & K
SIGNAL
PB/FM
REC/AM
※ 1N4148 EQUIVALENT = 1SS133

# IC BLOCK DIAGRAM – 1

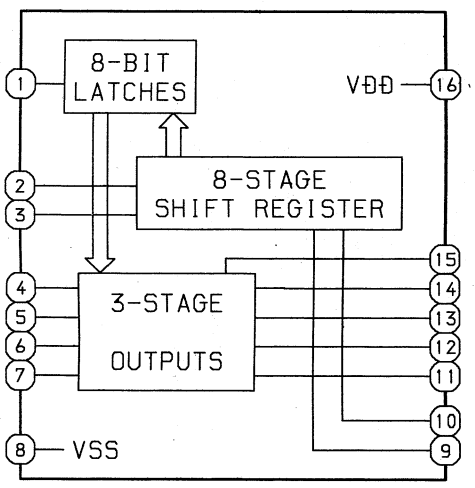
## IC, M65843FP



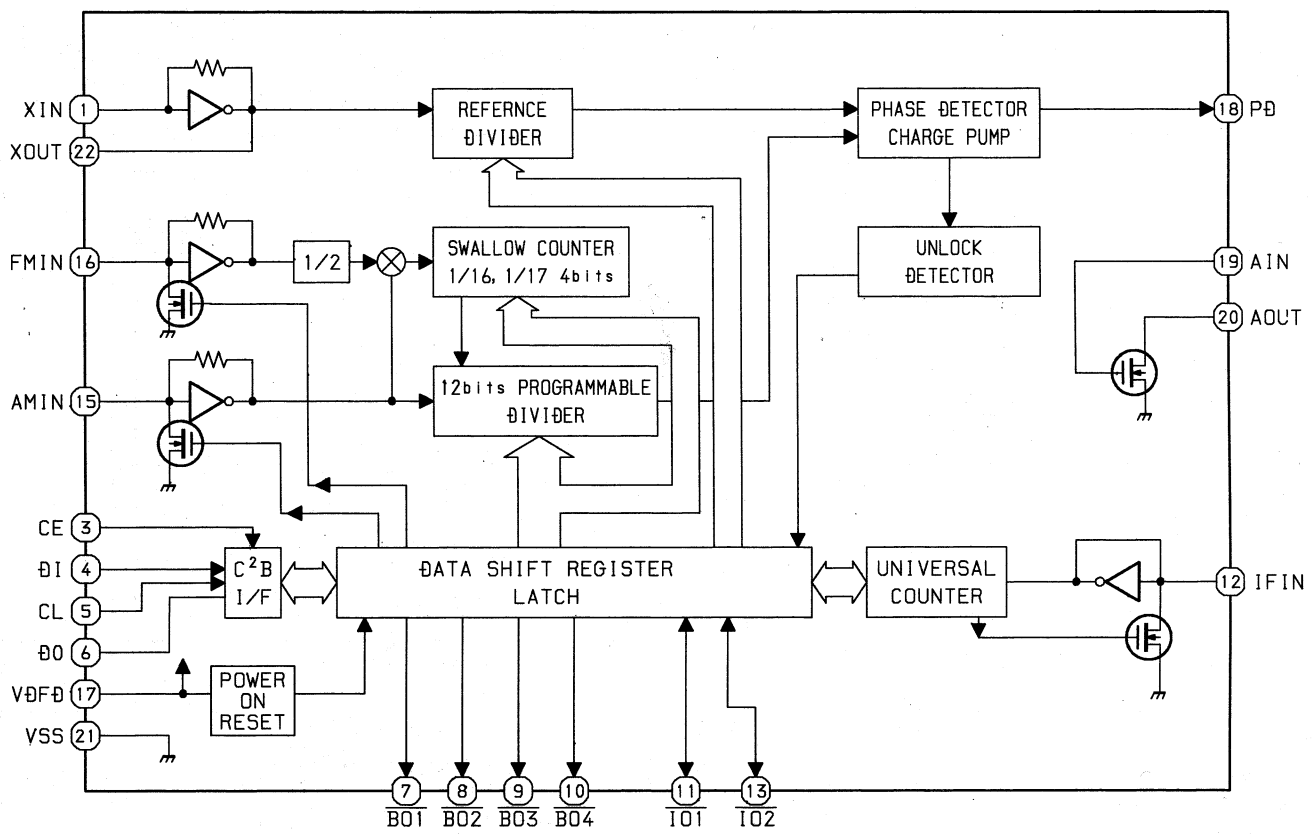

## IC,TC4052BP



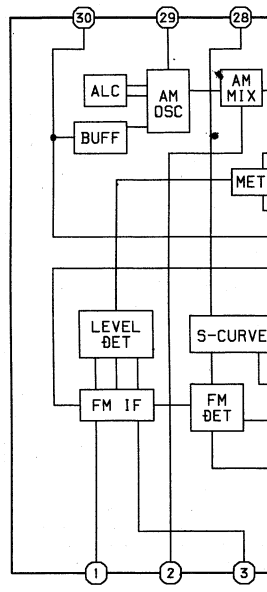

## IC, TC4094BP



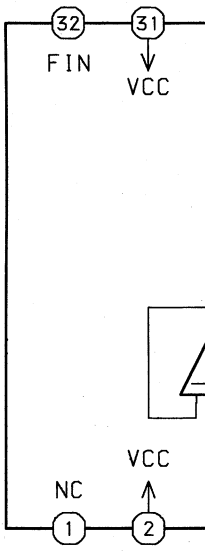

## IC, LC72131



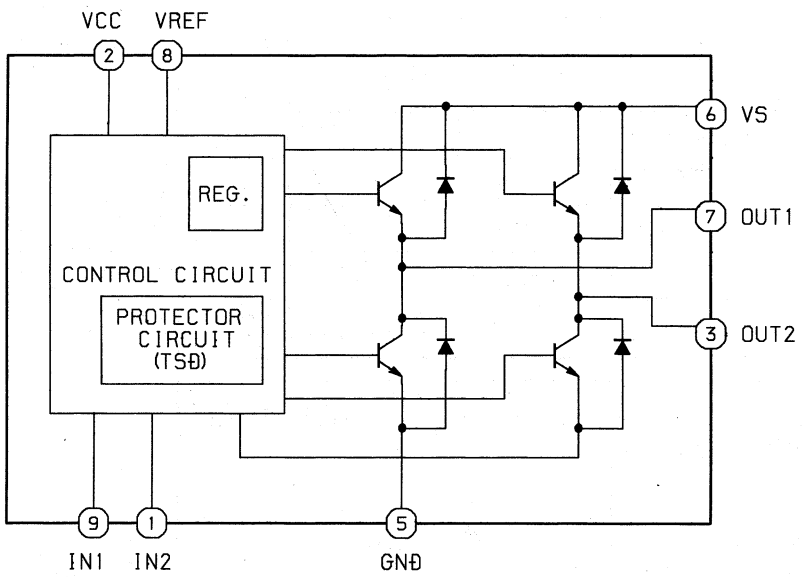

## IC, LA1836




## IC, BA6897S




## IC,TA7291S

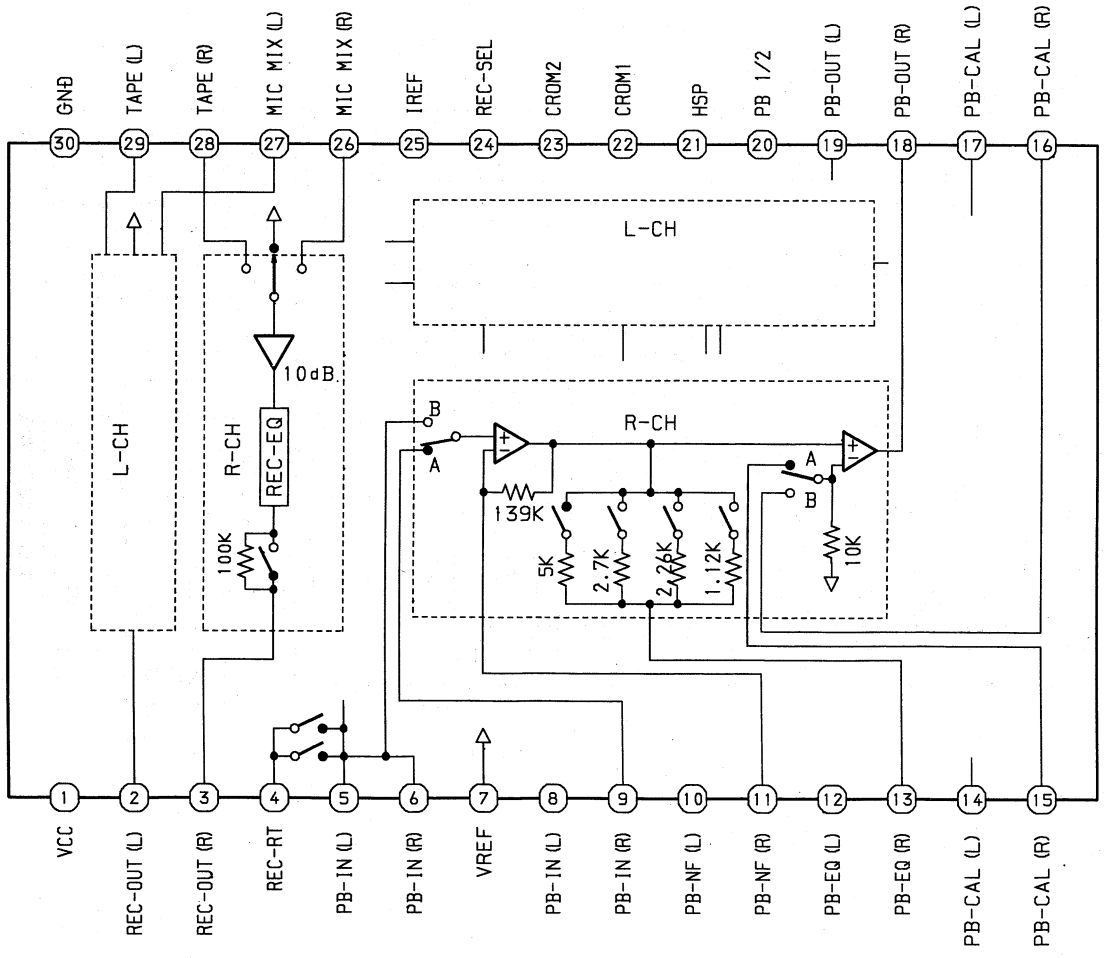



TRUTH TABLE

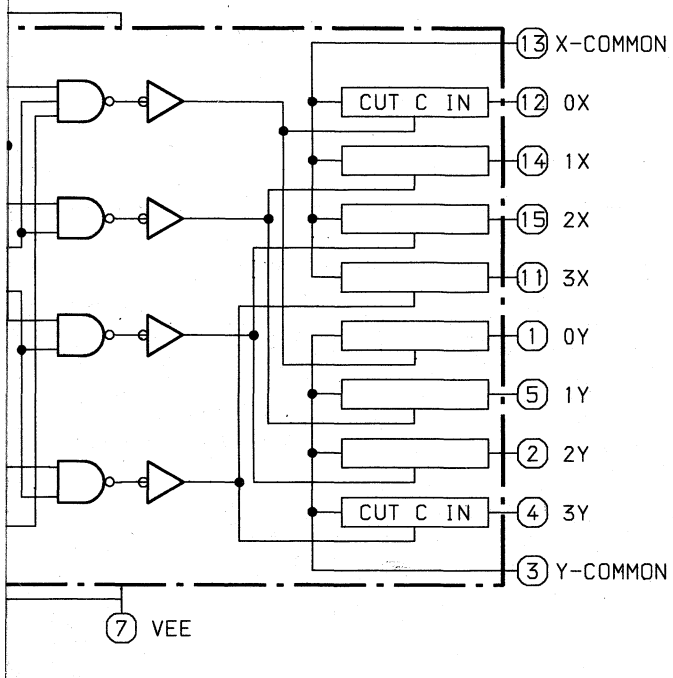
| INPUT | | OUTPUT | | MODE |
|---|---|---|---|---|
| IN1 | IN2 | OUT1 | OUT2 | |
| 0 | 0 | ∞ | ∞ | STOP |
| 1 | 0 | H | L | CW |
| 0 | 1 | L | H | CCW |
| 1 | 1 | L | L | BRAKE |

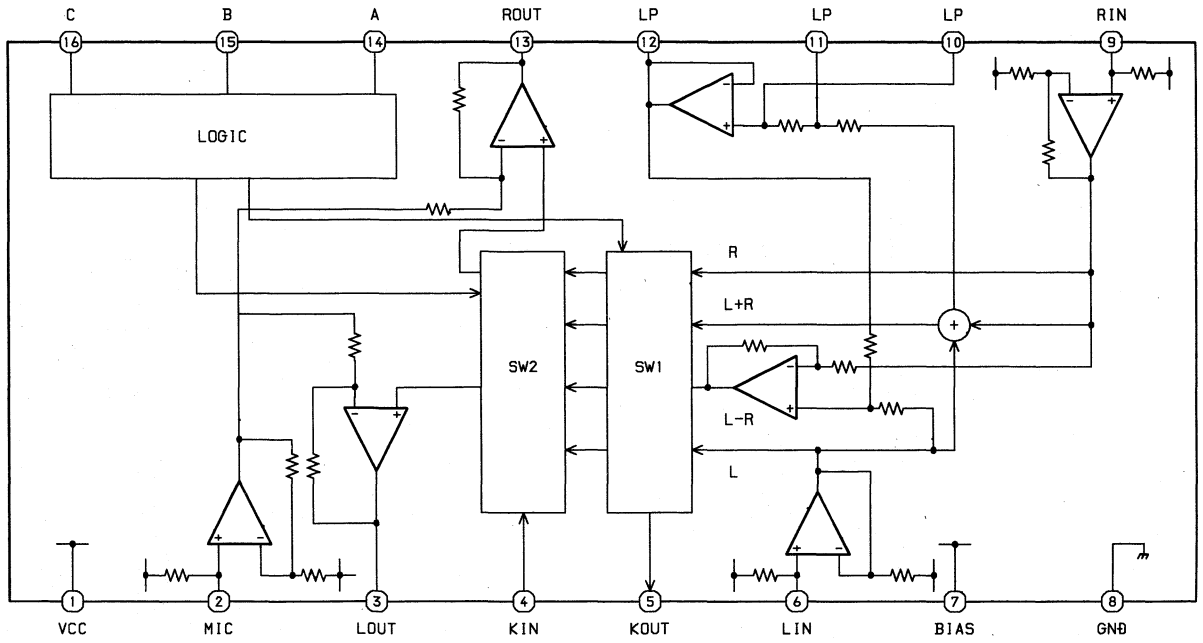
∞ : HI IMPEDANCE
NOTE : INPUT "H" ACTIVE

## IC,HA12185NT

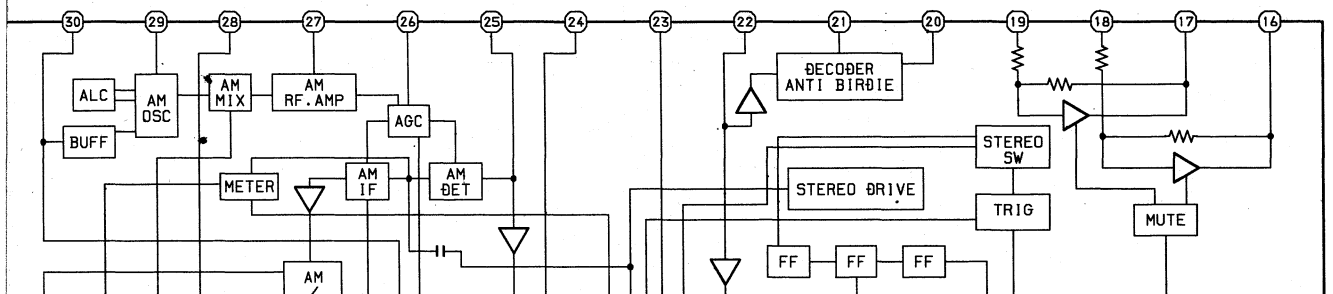


## IC, BA3837IC

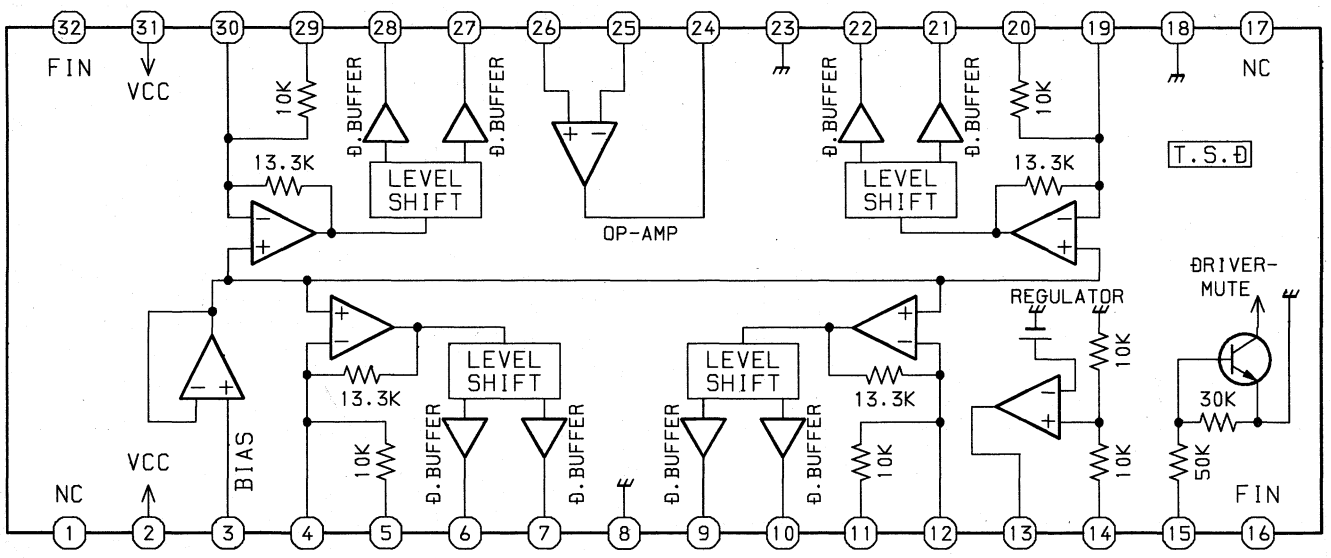



## IC, LA1836

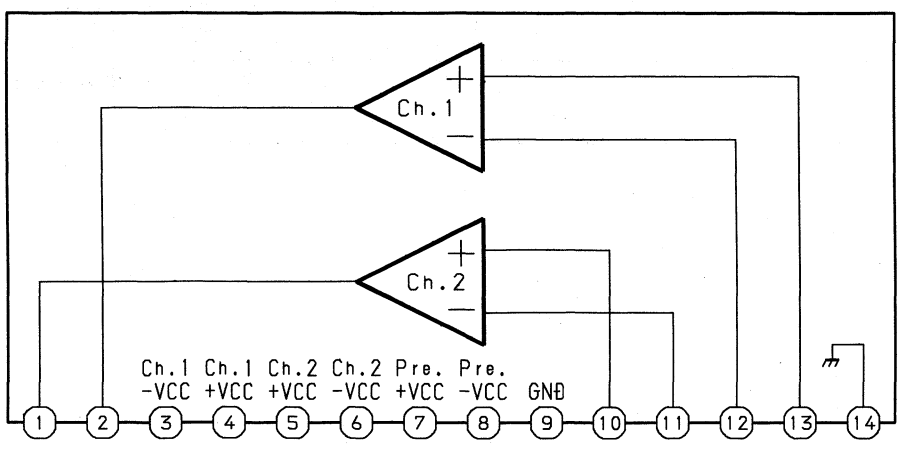



## IC, BA6897S

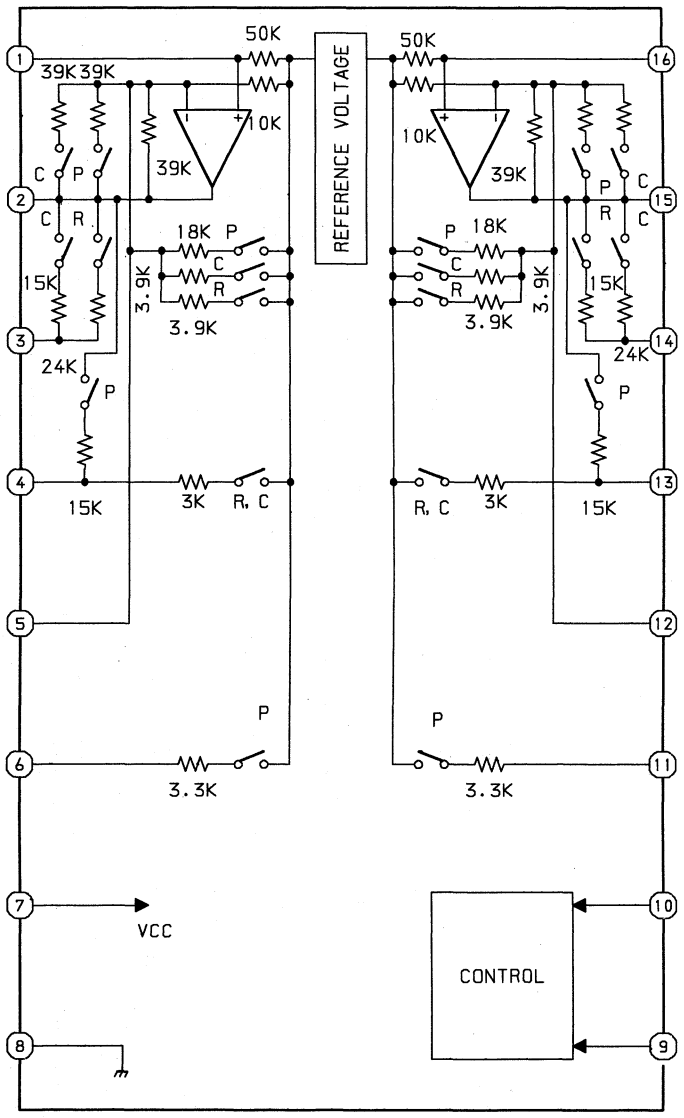


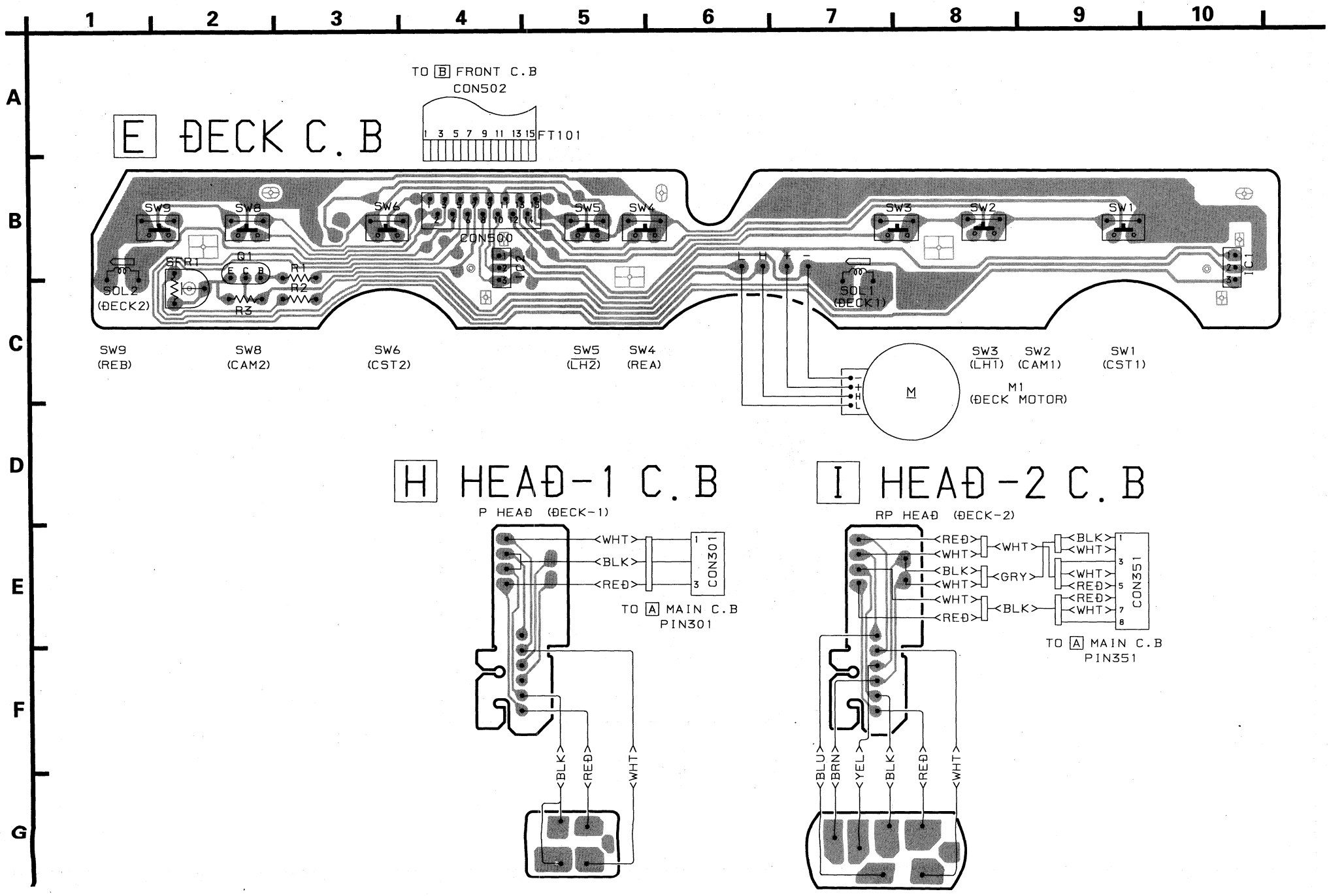

T.S.D:Thermal shift down circuit
D.BUFFER:Drive Buffer

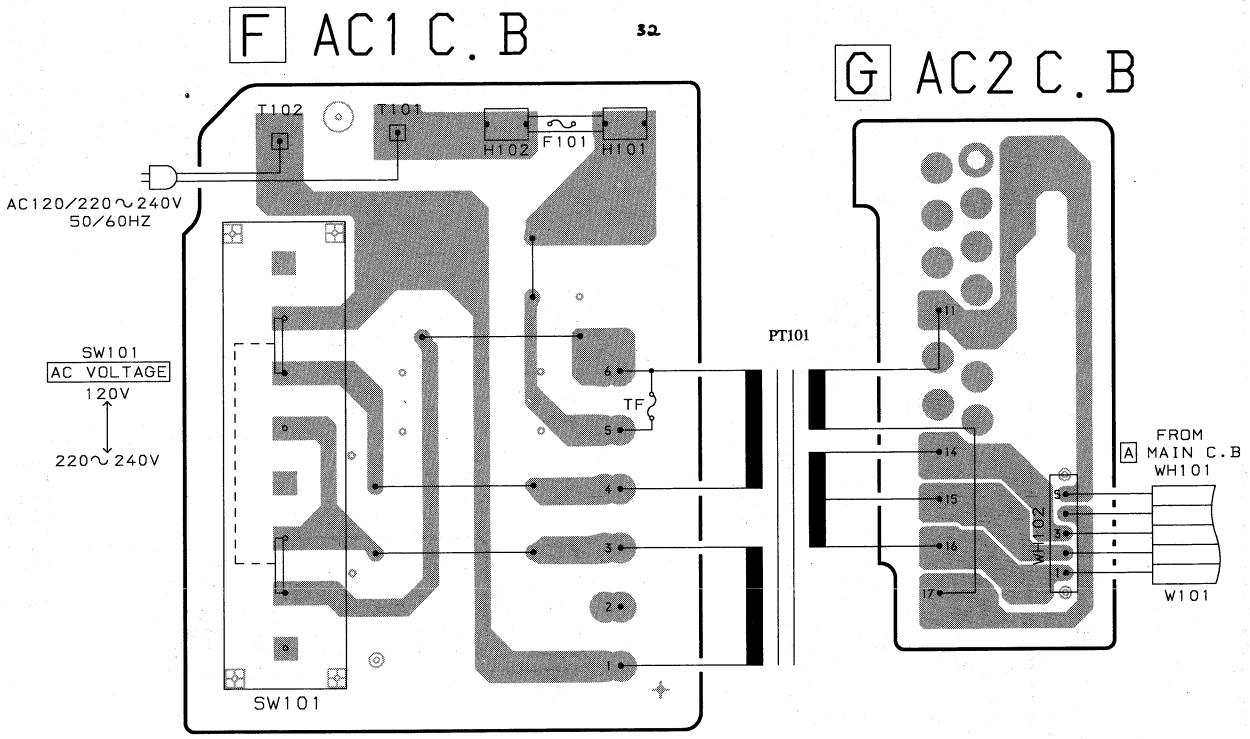
## IC,STK405-030
## IC,STK405-050



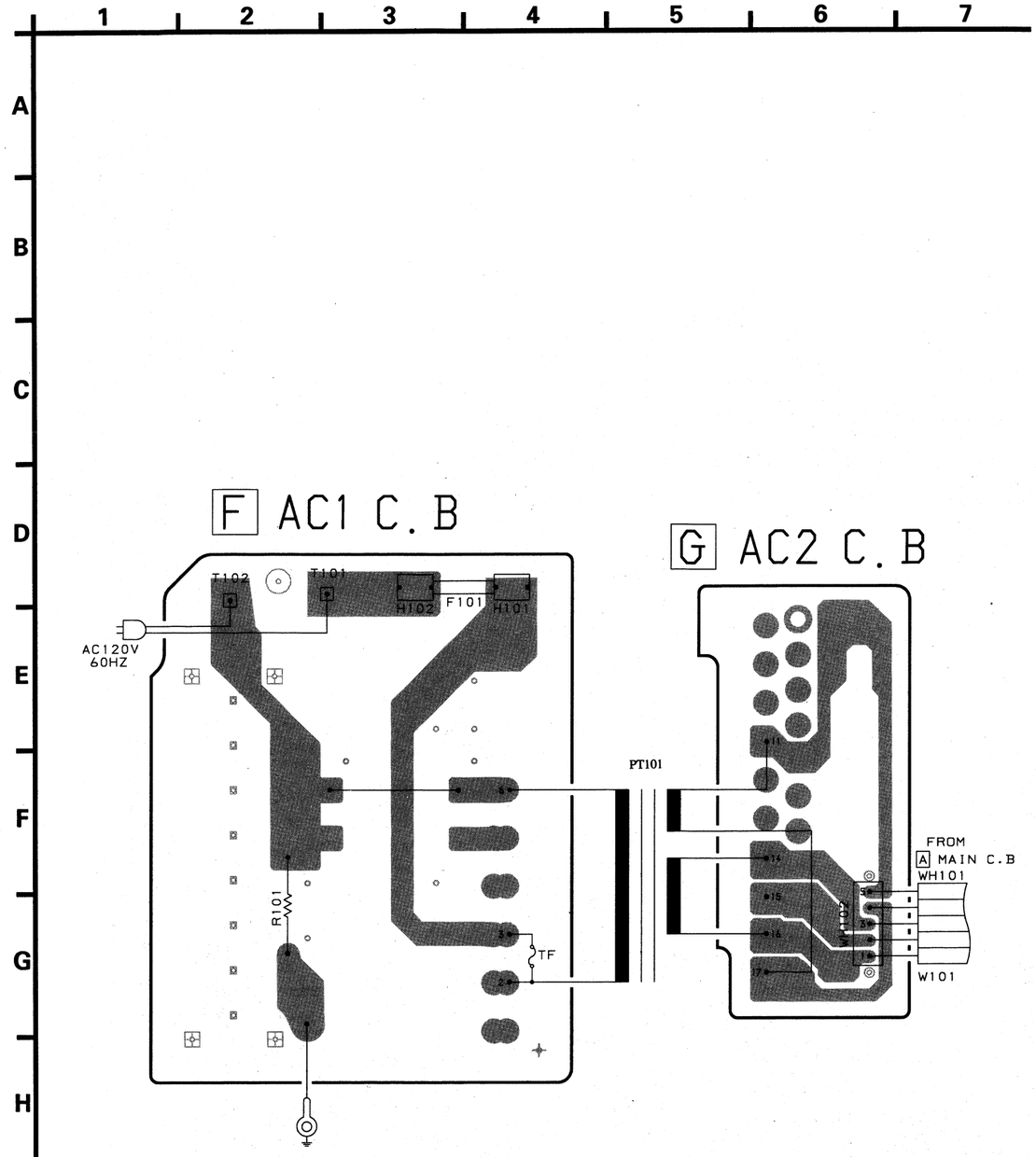

## IC,M62412P




1 2 3 4 5 6 7 8 9 10
A B C D E F G
TO B FRONT C.B
CON502
E DECK C.B
1 3 5 7 9 11 13 15 FT101
SW9 SW8 SW6 SW5 SW4 SW3 SW2 SW1
CON500
STR1
Q1
E C B
R1
R2
R3
SOL2
(DECK2)
SOL1
(DECK1)
IC1
SW9 (REB)
SW8 (CAM2)
SW6 (CST2)
SW5 (LH2)
SW4 (REA)
SW3 (LH1)
SW2 (CAM1)
SW1 (CST1)
M
M1
(DECK MOTOR)
H HEAD-1 C.B
P HEAD (DECK-1)
WHT
BLK
RED
CON301
TO A MAIN C.B
PIN301
BLK
RED
WHT
I HEAD-2 C.B
RP HEAD (DECK-2)
RED
WHT
BLK
GRY
CON351
TO A MAIN C.B
PIN351
BLU
BRN
YEL
BLK
RED
WHT

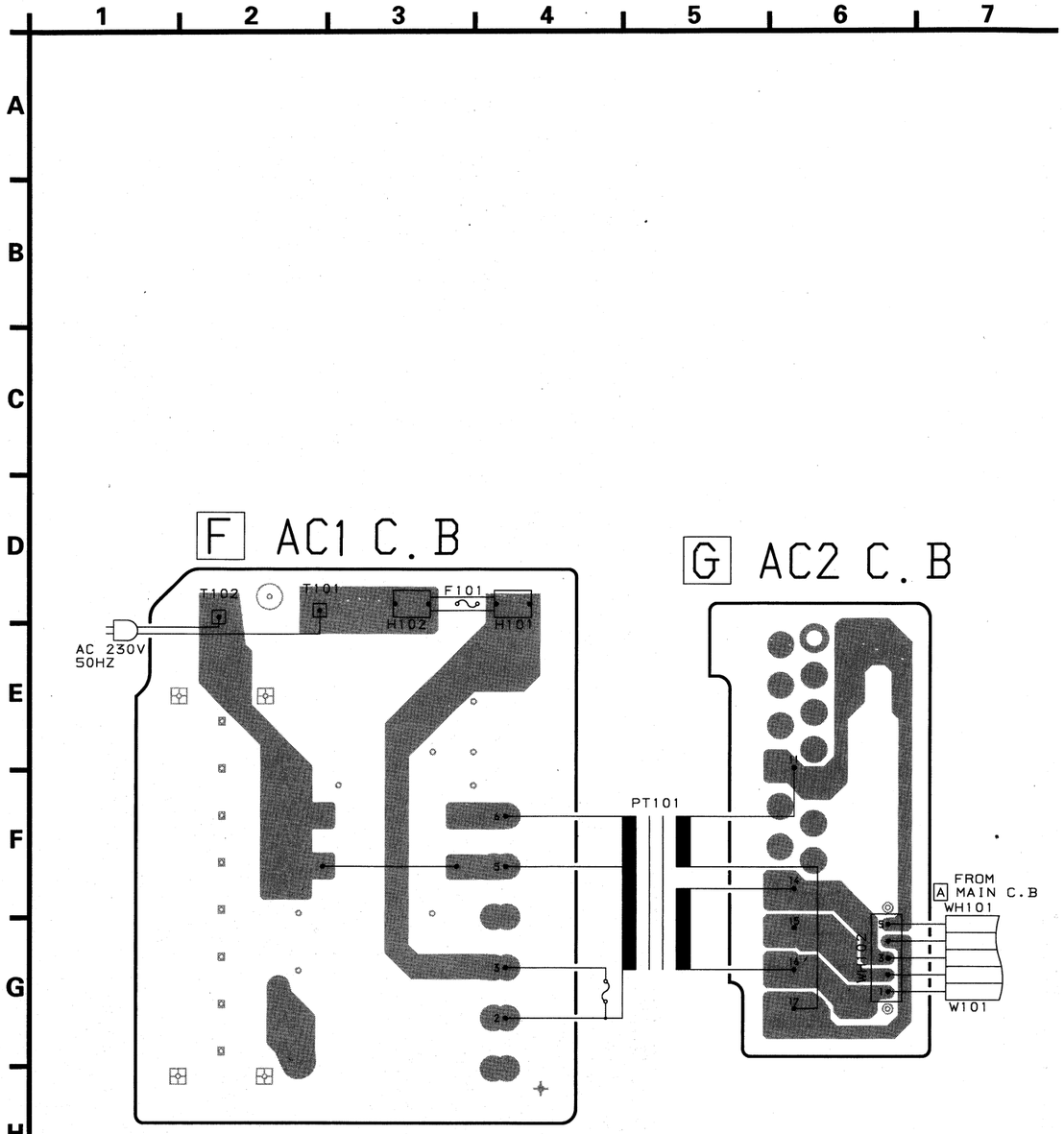

F AC1 C.B
G AC2 C.B
T102
T101
H102
F101
H101
AC120/220~240V
50/60HZ
SW101
AC VOLTAGE
120V
220~240V
SW101
PT101
TF
6
5
4
3
2
1
11
14
15
16
17
WH102
A FROM MAIN C.B WH101
W101

WIRING – 5 ( U )






WIRING – 6 ( EE,K,EZ )



# B FRONT C.B

# C MVR C.B

S324 OPEN/⏏ CLOSE

S318 RANDOM | S317 REPEAT | S316 EDIT

FL101 DISPLAY

CON500 FROM E DECK C.B — FT101

S315 POWER

FROM D CD C.B CON6 — FT102 — CON503

MVR801 VOLUME

HE, HR, HK ONLY

LH, U ONLY

EE, EZ, K ONLY

EXCEPT HE, HR, HK

IC201 IC203 IC600 IC601 IC700

CON501 — FROM A MAIN C.B CON601

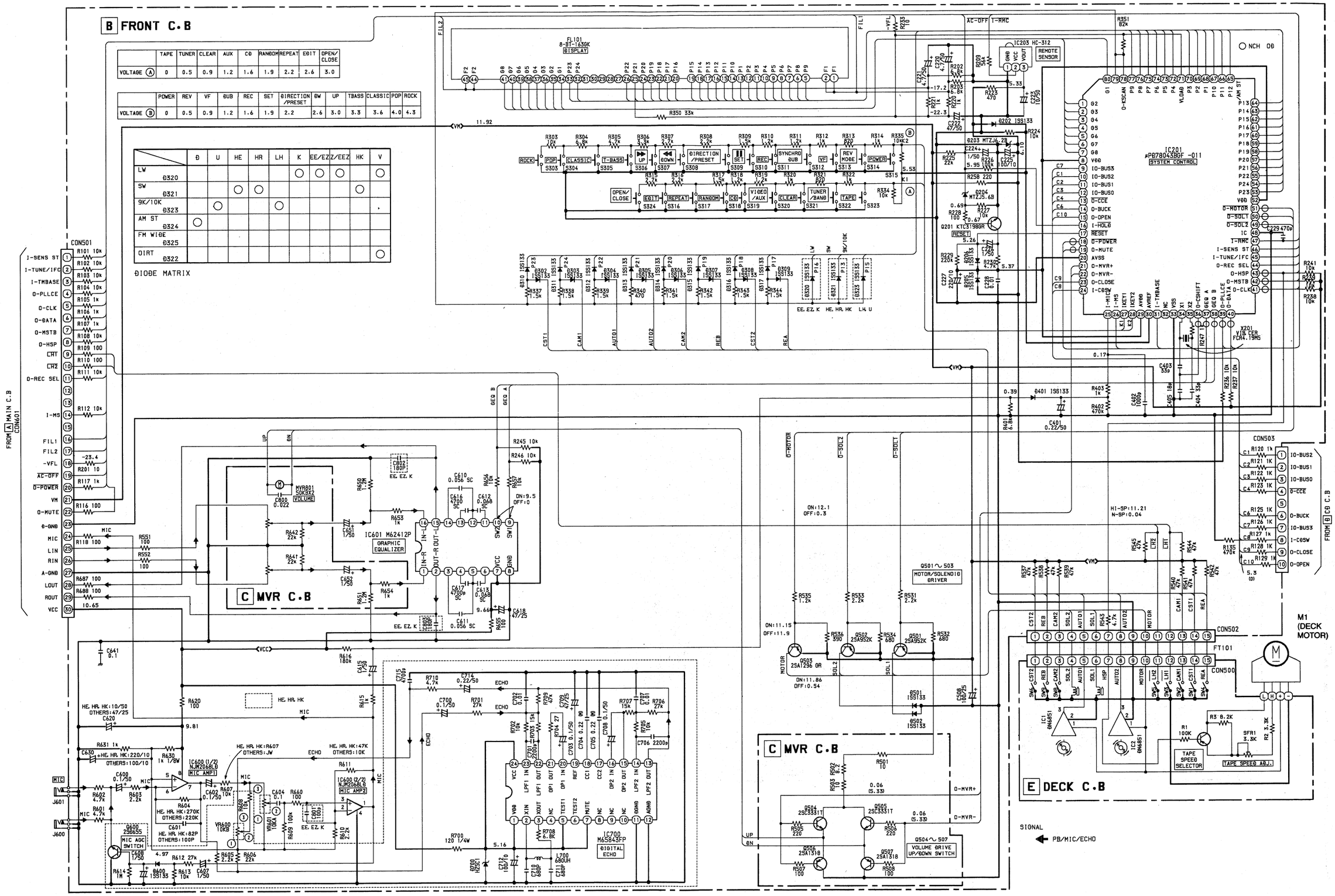
S305 CLASSIC | S304 POP | S303 ROCK | J600 MIC 2 | J601 MIC 1 | S319 CD | S320 AUX/VIDEO | S343 TUNER/BAND | S323 TAPE (DECK 1/2)

S306 T-BASS

VR601 MIC MIXING | VR600 DIGITAL ECHO | S307 ▶▶ UP | S308 ◀◀ DOWN | S309 ◀▶ DIRECTION/PRESET | S321 ■ CLEAR | S310 ▮▮ SET | S311 REC/REC MUTE | S312 SYNCHRO DUBBING

S313 VOCAL FADER/MULTIPLEX | S314 REV MODE (DECK 2)

# SCHEMATIC DIAGRAM – 3



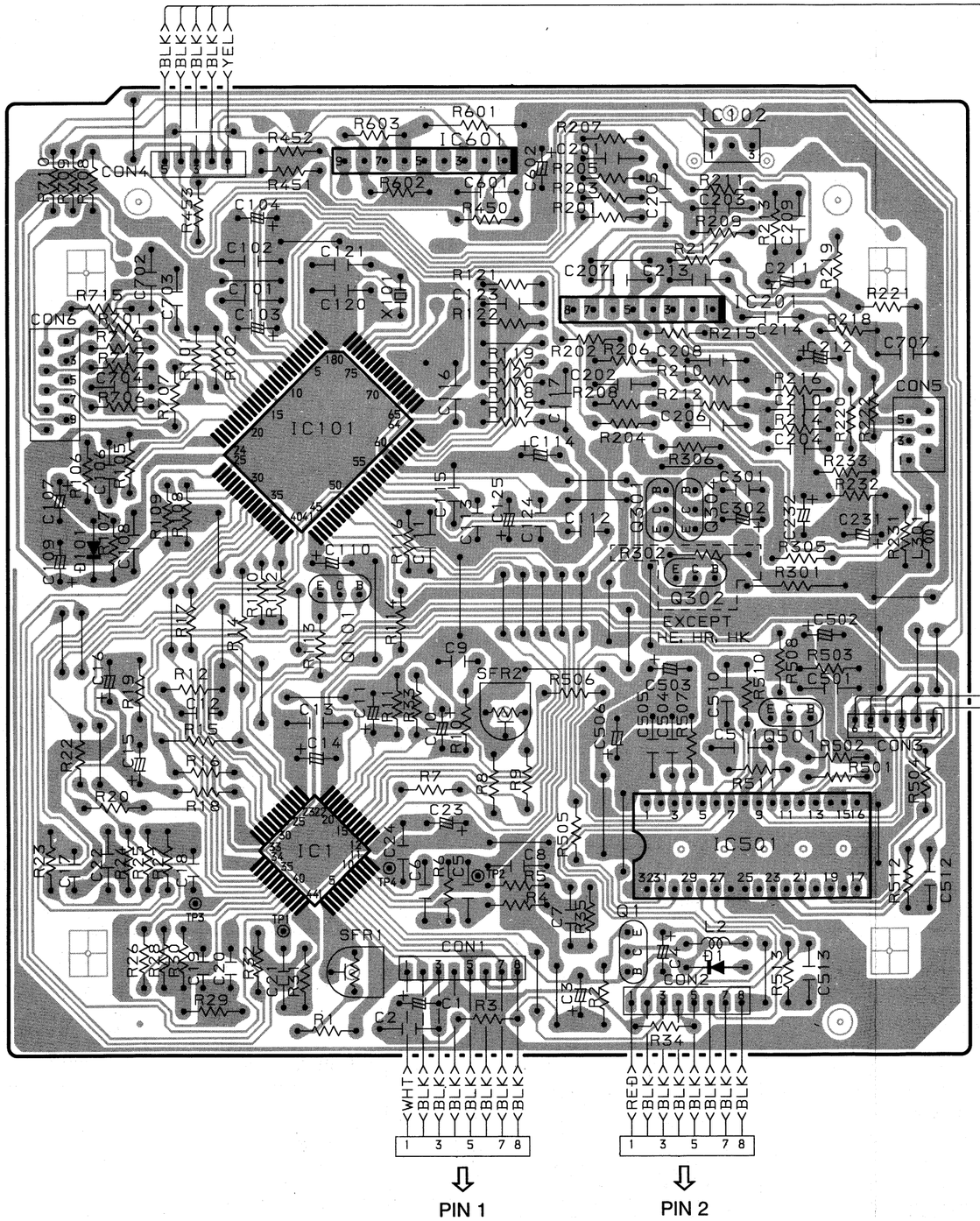

| | TAPE | TUNER | CLEAR | AUX | CD | RANDOM | REPEAT | EDIT | OPEN/CLOSE |
|---|---|---|---|---|---|---|---|---|---|
| VOLTAGE (A) | 0 | 0.5 | 0.9 | 1.2 | 1.6 | 1.9 | 2.2 | 2.6 | 3.0 |

| | POWER | REV | VF | DUB | REC | SET | DIRECTION /PRESET | BW | UP | TBASS | CLASSIC | POP | ROCK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VOLTAGE (B) | 0 | 0.5 | 0.9 | 1.2 | 1.6 | 1.9 | 2.2 | 2.6 | 3.0 | 3.3 | 3.6 | 4.0 | 4.3 |

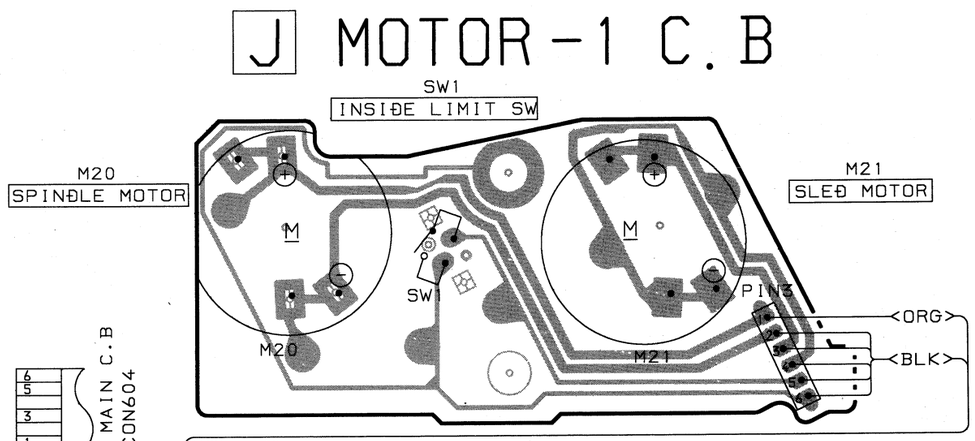
| | Ð | U | HE | HR | LH | K | EE/EZ | Z/EEZ | HK | V |
|---|---|---|---|---|---|---|---|---|---|---|
| LW Ð320 | | | | | | ○ | ○ | ○ | | ○ |
| SW Ð321 | | | ○ | ○ | | | | | ○ | |
| 9K/10K Ð323 | | ○ | | | ○ | | | | | |
| AM ST Ð324 | ○ | | | | | | | | | |
| FM WIDE Ð325 | | | | | | | | | | |
| OIRT Ð322 | | | | | | | | | | ○ |

ÐIODE MATRIX

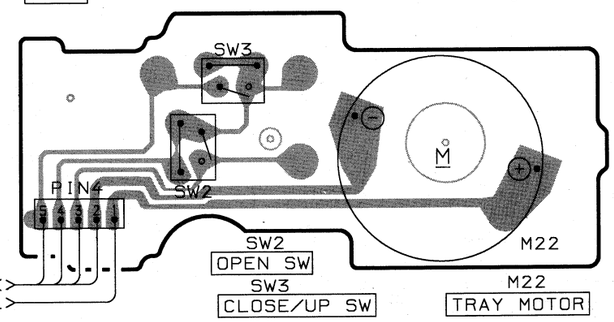
# Ð CÐ C.B



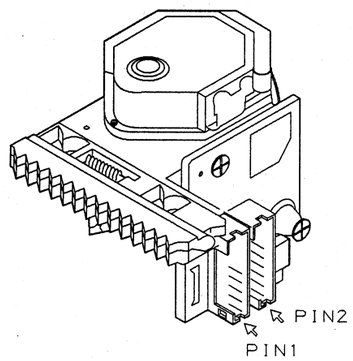

# J MOTOR-1 C.B




# K MOTOR-2 C.B




PICK UP ASSY



D CD C.B

IC101 TC9284BF
DIGITAL SIGNAL PROCESSOR

IC1 TA8191F
RF SIGNAL SERVO PROCESSOR

[IC501 BA6897S]

TRAY MOTOR BRIVER
IC601 TA7291S

IC201 (2/2) NJM4558L

IC201 (1/2) NJM4558L
IC201 EQUALIZER AMP

Q101 DTA144TS
SEARCH GAIN SW

Q301, 302, 304 +8V REG/SWITCH

EXCEPT HE, HR, HK
Q301 2SA952K
Q302 2SA952K
Q301 2SB1370E
HE, HR, HK
Q304 2SC1740S

Q501 2SA1318TU
+5V REG

Q1 2SA933S
LD DRIVER

B101 1SS133
D1 1SS133

X101 16.9344MHz

TRACKING BALANCE ADJ

TP1 TE
TP2 RF
TP3
TP4 (VREF)

CON1 WHITE
CON2 RED
CON3
CON4
CON5 FT103
CON6 FT102

PIN1
PIN2
PIN3
PIN4

PICK UP ASSY KSS-212A

LD PD FOCUS COIL TRACKING COIL

M20 SPINDLE MOTOR
M21 SLED MOTOR
INSIDE LIMIT SW SW1

M22 TRAY MOTOR
OPEN SW SW2
CLOSE/UP SW SW3

J MOTOR-1 C.B

K MOTOR-2 C.B

| LIMIT SW | OPEN SW | CLOSE SW |
|---|---|---|
| 5.3 | OFF | OFF | OFF |
| 4.3 | ON | OFF | OFF |
| 3.4 | OFF | OFF | ON |
| 2.5 | OFF | ON | OFF |
| 1.4 | ON | OFF | ON |
| 0 | ON | ON | OFF |

| ※ | Q301 | Q302 | R301 | R302 |
|---|---|---|---|---|
| ALL EXCEPT LH, HE, HR | 2SA952K | 2SA952K | 4.7 1/4W | 4.7 1/4W |
| ONLY LH, HE, HR | 2SB1370E | – | 2.2 1/4W | – |

SIGNAL AUDIO

TO B FRONT C.B CON503

TO A MAIN C.B CON604

# IC DESCRIPTION

IC, TC9284BF

| Pin No. | Pin Name | I/O | Description |
|---|---|---|---|
| 1 | GNDA | - | Analog GND terminal . |
| 2 | RO | O | R-channel in-phase output . |
| 3 | $\overline{RO}$ | O | R-channel out of phase output . |
| 4 | VDDA | - | D/A convertor supply terminal . |
| 5 | $\overline{LO}$ | O | L-channel in-phase output . |
| 6 | LO | O | L-channel out of phase output . |
| 7 | GNDA | - | D/A convertor ground terminal . |
| 8 | $\overline{TEST3}$ | I | Test terminal . |
| 9 | $\overline{TEST4}$ | I | Test terminal . |
| 10 | $\overline{TEST5}$ | I | Test terminal . |
| 11 | SBOK | O | Subcode Q data CRC check data output terminal . OK when "H". (Not used) |
| 12 | VDDD | - | Digital supply terminal . |
| 13 | GNDD | - | Digital ground terminal . |
| 14 | BUS0 | I/O | Command and data send / receive I / O terminal . |
| 15 | BUS1 | | |
| 16 | BUS2 | | |
| 17 | BUS3 | | |
| 18 | $\overline{CCE}$ | I | Chip enable signal input terminal for command and data send / receive .<br>Bus line active when "L" . |
| 19 | BUCK | I | Command and data send / receive clock input terminal . |
| 20 | PFCK | O | Playback data read clock output terminal . (Not used) |
| 21 | $\overline{RST}$ | I | Reset input terminal . Internal system reset when "L" . |
| 22 | SUBSYC | O | Subcode synchronisation terminal . (Not used) |
| 23 | SUBD | O | Subcode P-W output terminal . (Not used) |
| 24 | CLCK | I | Subcode P-W data read-out clock input terminal . |
| 25 | VDDD | - | Digital supply terminal . |
| 26 | GNDD | - | Digital ground terminal . |
| 27 | DFCT | O | Defect detection signal output terminal .<br>VREF when a defect signal is detected: Normally HiZ . (Not used.) |
| 28 | TEL2 | O | Tracking gain adjustment analog switch output terminal .VREF or HiZ . |
| 29 | TEL1 | | |
| 30 | TGUL | O | Analog switch output terminal for switching the low range phase compensator of the tracking servo loop .<br>HiZ (gain up) when shock signal is detected; VREF when gain up . |
| 31 | TGUH2 | O | Analog switch output terminal for swithching the middle and high range phase compensator of the tracking servo loop. HiZ (gain up) when shock signal is detected; nomally VREF.TGUH1 is used when playing back in normal mode; TGUH2 when playing back in high speed mode. (TGUH2 is not used.) |
| 32 | TGUH1 | | |
| 33 | TKIC | O | Tracking actuator kick signal output terminal .<br>Kicked to an external cylinder when "H"; an internal cylinder when "L" . |



| Pin No. | Pin Name | I/O | Description |
|---|---|---|---|
| 34 | FMON | O | Feed servo ON/OFF analog switch output terminal . (Pin 35 is not used)<br>Feed servo: ON / OFF<br>FMON: HiZ / VREF |
| 35 | $\overline{TEST1}$ | I | Test terminal . |
| 36 | FMFB | O | Feed motor FWD/BWD operation control signal output terminal .<br>Feed to an external cylinder when "H"; feeds to an internal cylinder when "L" . |
| 37 | $\overline{TEST}$ | I | Test terminal. Normally "H" or open. (Not used.) |
| 38 | DMON | O | Analog switch output terminal for switching the gain of the disk motor drive circuit . |
| 39 | DMFC | O | Disk motor CLV servo AFC signal output terminal .<br>DMFK: H: Motor accelerated<br>DMSV: PWM: CLV servo ON<br>DMBK: L: Motor decelerated<br>DMOFF: VREF: CLV servo OFF |
| 40 | DMPC | O | Disk motor CLV servo APC signal output terminal . |
| 41 | 2VREF | I | Two times reference voltage input terminal . (VREF x 2) |
| 42 | SEL | O | Servo mode indication signal output terminal .<br>L: OFF: OFF: LD OFF<br>HiZ: ON: OFF: Focus search<br>H: ON: ON: Normal play etc., (Focus servo ON:FOK) |
| 43 | FCSI | O | Focus actuator drive signal output terminal in focus search mode .<br>FGASR: H: Lens distant from disk<br>FGSS: L: Lens near disk<br>Others: HiZ: Other than focus search |
| 44 | FKIC | O | Focus actuator drive signal output terminal in focus gain adjustment mode . (Not used.)<br>FGASR: H: Lens distant from disk<br>FGSS: L: Lens near disk<br>Other: HiZ: Other than focus gain adjustment |
| 45 | FEL2 | O | Focus gain adjustment analog switch output terminal. (Not used.) |
| 46 | FEL1 | | |
| 47 | FEI | I | Focus error signal input terminal . |
| 48 | TESH | I | Analog switch input terminal for sample-holding of the tracking error signal . |
| 49 | TEOF | O | Analog switch input terminal for tracking servo ON/OFF .<br>VREF when tracking servo is OFF . |
| 50 | SBAD | I | Sub-beam add signal input terminal . |
| 51 | RFRP | I | RF ripple signal input terminal . |

<table>
<tr><th>Pin No.</th><th>Pin Name</th><th>I/O</th><th>Description</th></tr>
<tr><td>52</td><td>VREF</td><td>I</td><td>Reference voltage input terminal . (+2.2V)</td></tr>
<tr><td>53</td><td>RFI</td><td>I</td><td>RF signal input terminal .</td></tr>
<tr><td>54</td><td>GNDA</td><td>-</td><td>Analog ground terminal .</td></tr>
<tr><td>55</td><td>DTSC2</td><td>O</td><td>EFM signal negatice-phase output terminal for data slice control .</td></tr>
<tr><td>56</td><td>MONIT</td><td>O</td><td>Control terminal . (Not used.)</td></tr>
<tr><td>57</td><td>DTSC1</td><td>O</td><td>EFM signal positive-phase output terminal for data slice control .</td></tr>
<tr><td>58</td><td>VDDA</td><td>-</td><td>Analog power voltage terminal . (+5V)</td></tr>
<tr><td>59</td><td>PDCNT</td><td>I</td><td>PDO output control terminal . PDO output is involuntarily set to HiZ when "L" .</td></tr>
<tr><td>60</td><td>PDO</td><td>O</td><td>Output terminal for phase difference signal between EFM and PLCK signals .</td></tr>
<tr><td>61</td><td>TMAX</td><td>O</td><td>TMAX signal output terminal . HiZ in system lock .
<table>
<tr><th>TMAX cycle</th><th>TMAX output</th></tr>
<tr><td>Longer than specified cycle</td><td>L</td></tr>
<tr><td>Shorter than specified cycle</td><td>H(2VREF)</td></tr>
<tr><td>Specified cycle</td><td>HiZ</td></tr>
</table></td></tr>
<tr><td>62</td><td>LPFN</td><td>I</td><td>LPF amplifier negative-phase input terminal for PLL .</td></tr>
<tr><td>63</td><td>LPFO</td><td>O</td><td>LPF amplifier output terminal for PLL .</td></tr>
<tr><td>64</td><td>VCOF</td><td>I</td><td>VCO filter terminal .</td></tr>
<tr><td>65</td><td>TEXTX</td><td>I</td><td>Test terminal .</td></tr>
<tr><td>66</td><td>$\overline{HS}$</td><td>O</td><td>High- speed monitor output terminal . High-speed mode when "L" . (Not used.)</td></tr>
<tr><td>67</td><td>GNDD</td><td>O</td><td>Digital ground terminal .</td></tr>
<tr><td>68</td><td>SPDA</td><td>O</td><td>Processor status signal output terminal .<br>Correction / discrimination data, memory buffer capacity, etc. (Not used.)</td></tr>
<tr><td>69</td><td>COFS</td><td>O</td><td>Correction system frame frequency signal output terminal. 7.35kHz (Not used.)</td></tr>
<tr><td>70</td><td>WDCK</td><td>O</td><td>Word clock output terminal . Normally 88.2kHz . (Not used.)</td></tr>
<tr><td>71</td><td>CHCK</td><td>O</td><td>Channel clock output terminal . Normally 44.1kHz . (Not used.)</td></tr>
<tr><td>72</td><td>BCK</td><td>O</td><td>Bit clock output terminal . Normally 1.4112MHz . (Not used.)</td></tr>
<tr><td>73</td><td>AOUT</td><td>O</td><td>Audio data output terminal . (Not used.)</td></tr>
<tr><td>74</td><td>EMPH</td><td>O</td><td>Emphasis ON/OFF indication signal output terminal . emphasis on when "H" .</td></tr>
<tr><td>75</td><td>DOUT</td><td>O</td><td>Digital OUT output terminal . (Not used.)</td></tr>
<tr><td>76</td><td>TEST2</td><td>I</td><td>Test terminal .</td></tr>
<tr><td>77</td><td>VDDX</td><td>-</td><td>Crystal supply terminal .</td></tr>
<tr><td>78</td><td>X1</td><td>I</td><td rowspan="2">Crystal oscillator connection terminal .</td></tr>
<tr><td>79</td><td>X0</td><td>O</td></tr>
<tr><td>80</td><td>GNDX</td><td>-</td><td>Crystal ground terminal .</td></tr>
</table>

IC, uPD70843BGF-011

| Pin No. | Pin Name | I/O | Description |
|---|---|---|---|
| 1~7 | G2~G8 | O | FL display grid output . |
| 8 | VDD | - | Power supply . (+5.5V) |
| 9~12 | IO BUS3~IO BUS0 | I/O | CD/FRONT u-con command / data bus line . |
| 13 | $\overline{\text{O-CCE}}$ | O | Chip enable signal input terminal for command & data send / receive . |
| 14 | O-BUCK | O | Command & data send / receive clock input terminal . |
| 15 | O-OPEN | O | CD tray open signal . |
| 16 | $\overline{\text{I-HOLD}}$ | I | When AC power is not supplied, the controller is held. Clock stop & memory maintain . |
| 17 | $\overline{\text{RESET}}$ | I | System reset input . |
| 18 | $\overline{\text{O-POWER}}$ | O | Power ON/OFF control . |
| 19 | O-MUTE | O | System mute . |
| 20 | AVSS | - | Gnd |
| 21 | O-MVR+ | O | Motor volume UP signal . |
| 22 | O-MVR- | O | Motor volume DOWN signal . |
| 23 | O-CLOSE | O | CD tray close signal . |
| 24 | I-CDSW | I | CD tray OPEN/CLOSE switch signal . |
| 25 | I-MIC | I | Mic input signal . |
| 26 | I-MS | I | Music sensor input signal . |
| 27 | I-KEY 1 | I | Key matrix input . |
| 28 | I-KEY 2 | I | Key matrix input . |
| 29 | AVDD | - | A/D convertor power supply . |
| 30 | AVREF | I | A/D convertor reference voltage . |
| 31 | I-TMBASE | I | Clock pulse (8 Hz) input from PLL IC (LC72131) . |
| 32 | NC | - | Not used . |
| 33 | VSS | - | GND . |
| 34 | X1 | - | 4.19 MHz oscillator circuit . |
| 35 | X2 | - | |
| 36 | O-CSHIFT | O | Center frequency switch . |
| 37 | GEQ A | O | Graphic equalizer control signal . |
| 38 | GEQ B | O | Graphic equalizer control signal . |
| 39 | O-PLLCE | O | Chip enable output for tuner PLL IC (LC72131) . |
| 40 | O-DATA | O | Serial data to main board . |
| 41 | O-CLOCK | O | Clock signal to main board . |
| 42 | O-MSTB | O | Strobe signal to main board . |
| 43 | O-HSP | O | Motor high speed control signal . |
| 44 | O-REC SEL | O | Tape / Aux recording selection . |
| 45 | I-TUNE /IFC | I | Tuner stereo detect input /IF count serial data input . |
| 46 | I-SENS ST | I | Stereo ON signal input . |
| 47 | $\overline{\text{I-RMC}}$ | I | Remote control input . |
| 48 | IC | - | Internally connected to Vss . |
| 49 | $\overline{\text{O-SOL2}}$ | O | Deck 2 plunger ON/OFF output . |

| Pin No. | Pin Name | I/O | Description |
|---|---|---|---|
| 50 | $\overline{\text{O-SOL1}}$ | O | Deck 1 plunger ON/OFF output . |
| 51 | $\overline{\text{O-MOTOR}}$ | O | Deck motor ON/OFF output . |
| 52 | VDD | - | Power supply . (+5.5V) |
| 53 | P23/CST1 | O/I | FL display segment output / DECK 1 cassette switch input . |
| 54 | P24/CAM1 | O/I | FL display segment output / DECK 1 cam switch input . |
| 55 | P22/AUTO1 | O/I | FL display segment output / DECK 1 auto stop signal input . |
| 56 | P21/AUTO2 | O/I | FL display segment output / DECK 2 auto stop signal input . |
| 57 | P20/CAM2 | O/I | FL display segment output / DECK 2 cam switch input . |
| 58 | P19/REB | O/I | FL display segment output / DECK 2 side B Rec switch input . |
| 59 | P18/CST2 | O/I | FL display segment output / DECK 2 cassette switch input . |
| 60 | P17/REA | O/I | FL display segment output / DECK 2 side A Rec switch input . |
| 61 | P16/LW | O/I | FL display segment output /Long wave select input . |
| 62 | P15/9/10K STEP | O/I | FL display segment output / AM 10k step selection input . |
| 63 | P14/FM WIDE | O/I | FL display segment output / FM wide select input . |
| 64 | P13/SW | O/I | FL display segment output / Short wave select input . |
| 65 | P12/AMST | O/I | FL segment output / AM stereo select input . |
| 66 | P11/OIRT | O/I | FL display segment output /OIRT select input . |
| 67 | P10 | O | FL display segment output . |
| 68~70 | P1~P3 | O | FL display segment output . |
| 71 | VLOAD | - | Nagative pull down voltage . |
| 72~77 | P4~P9 | O | FL display segment output . |
| 78 | O-KSCAN | O | Switch scan timing output. |
| 79 | - | - | Not used . |
| 80 | G1 | O | FL display grid output . |

IC, TA8191F

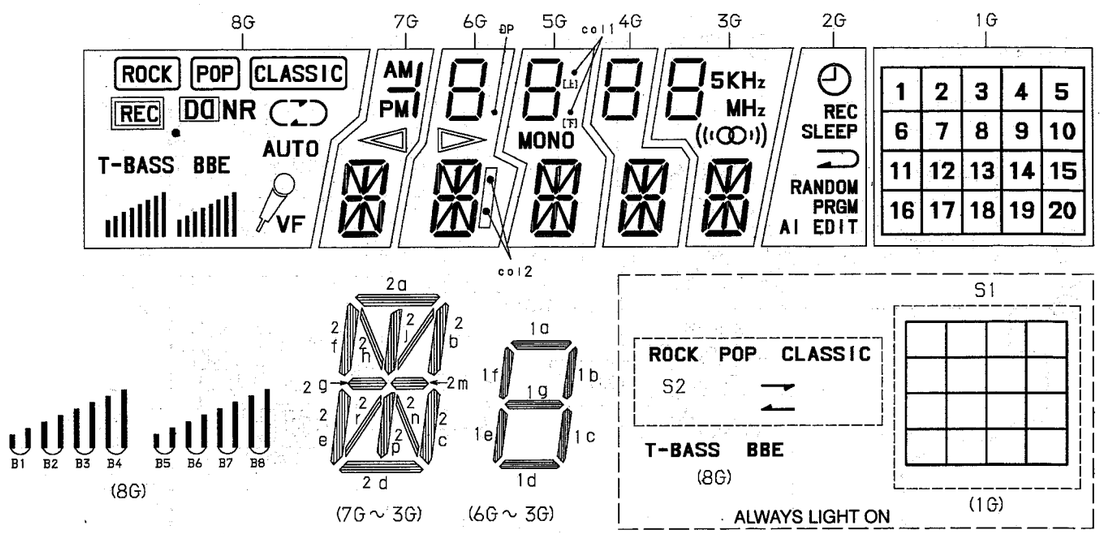
| Pin No. | Pin Name | I/O | Description |
|---|---|---|---|
| 1 | TPO | O | Sub-beam I-V amplifier (TP AMP) output terminal . |
| 2 | TPI | I | Sub-beam I-V amplifier (TP AMP) input terminal . |
| 3 | TNI | I | Sub-beam I-V amplifier (TP AMP) input terminal . |
| 4 | FNI | I | Main-beam I-V amplifier (FN AMP) input terminal . |
| 5 | FPI | I | Main-beam I-V amplifier (FP AMP) input terminal . |
| 6 | LDO | O | Laser diode amplifier (LD AMP) output terminal . |
| 7 | MDI | I | Monitor photo diode amplifier (MD AMP) input terminal . |
| 8 | RFN | I | RF amplifier (RF AMP) negative-phase input terminal . |
| 9 | RFO | O | RF amplifier (RF AMP) output terminal . |
| 10 | RFI | I | RF ripple signal forming circuit input terminal . |
| 11 | VREF | O | Reference voltage output terminal . (+2.1V) |
| 12 | VFRP | O | RF ripple signal output terminal . |
| 13 | SBAD | O | Scratch detection signal output terminal . |
| 14 | FEB | I | Focus error balance adjustment input terminal . |
| 15 | FEO | O | Focus error amplifier (FE AMP) output terminal . |
| 16 | SEL | I | Analog switch control signal input terminal . |
| 17 | VEE | - | Power terminal . (GND) |
| 18 | FSN | I | Focus output amplifier (FS AMP) negative-phase input terminal . |
| 19 | FSO | O | Focus output amplifier (FS AMP) output terminal . |
| 20 | COSC | O | Capacitor connection terminal for focus search signal generation . |
| 21 | OSCI | I | Built-in power supply control input terminal for focus search signal generation . |
| 22 | GND | - | GND |
| 23 | VCC | I | Power supply terminal . (+5V) |
| 24 | DMEP | I | Disk motor apmlifier (DM AMP) positive-phase input terminal . |
| 25 | DMEN | I | Disk motor amplifier (DM AMP) negative-phase input terminal . |
| 26 | DMEO | O | Disk motor amplifier (DM AMP) output terminal . |
| 27 | DMPO | O | Disk motor drive amplifier (DM AMP) output terminal . (Not used.) |
| 28 | PVR | I | Drive amplifier reference voltage input terminal . |
| 29 | FMPO | O | Feed motor drive amplifier (FMP AMP) output terminal . (Not used) |
| 30 | FMEO | O | Feed motor drive amplifier (FM AMP) output terminal . |
| 31 | FMEN | I | Feed motor amplifier (FM AMP) negative-phase input terminal . |
| 32 | FMEP | I | Feed motor amplifier (FM AMP) positive-phase input terminal . |
| 33 | FAPO | O | Focus actuator drive amplifier (FAP AMP) output terminal . (Not used) |
| 34 | 2VRO | O | 2VREF amplifier (2VREF AMP) output terminal . |
| 35 | 2VRP | I | 2VREF amplifier (2VREF AMP) positive-phase input terminal . |
| 36 | 2VRN | I | 2VREF amplifier (2VREF AMP) negative-phase input terminal . |
| 37 | TS2O | O | Tracking servo amplifier 2 (TS2 AMP) output terminal . |
| 38 | TS2N | I | Tracking servo amplifier 2 (TS2 AMP) negative-phase input terminal . |
| 39 | TS2P | I | Tracking servo amplifier 2 (TS2 AMP) positive-phase input terminal . |
| 40 | TS1O | O | Tracking servo amplifier 1 (TS1 AMP) output terminal . |

| Pin No. | Pin Name | I/O | Description |
|---|---|---|---|
| 41 | TS1N | I | Tracking servo amplifier 1 (TS1 AMP) negative-phase input terminal . |
| 42 | TS1P | I | Tracking servo amplifier 1 (TS1 AMP) positive-phase input terminal . |
| 43 | TSO | O | Tracking output amplifier (TS AMP) output terminal . |
| 44 | TSN | I | Tracking output amplifier (TS AMP) negative-phase input terminal . |



## FL GRID ASSIGNMENT / ANODE CONNECTION

FL, 8-BT-163GK




8-BT-163GK
GRID ASSIGNMENT

83-NEG-632-01

## ANODE CONNECTION

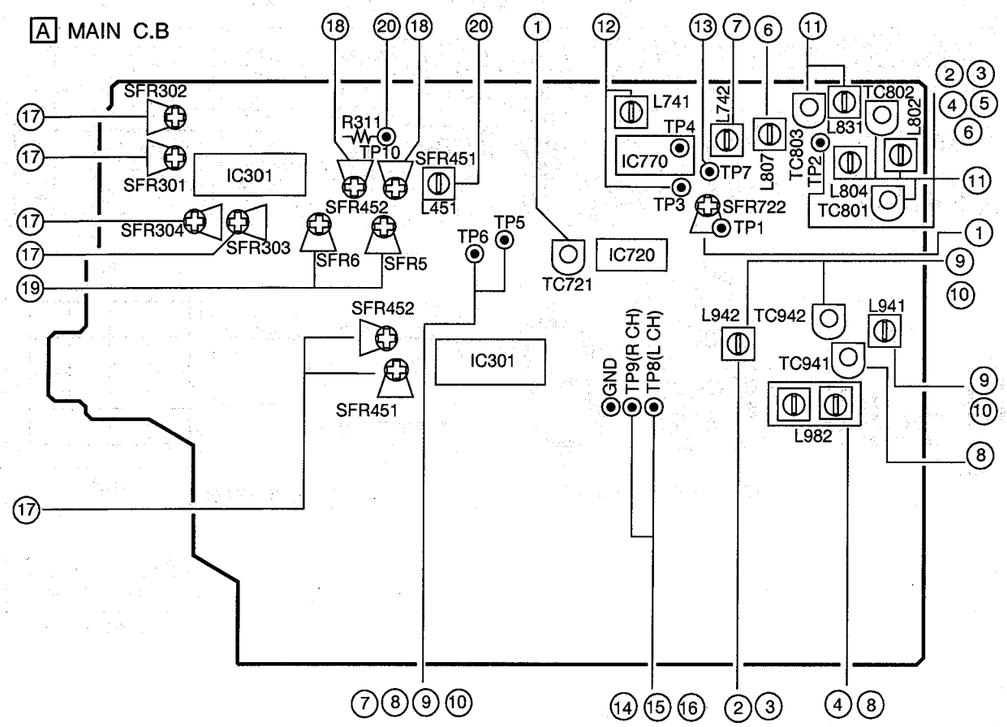
| | 8G | 7G | 6G | 5G | 4G | 3G | 2G | 1G |
|---|---|---|---|---|---|---|---|---|
| P1 | ☾ | 2d | 2d | 2d | 2d | 2d | SLEEP | 20 |
| P2 | T-BASS | 2j,2p | 2j,2p | 2j,2p | 2j,2p | 2j,2p | RANDOM | 19 |
| P3 | BBE | 2n | 2n | 2n | 2n | 2n | ⇄ | 18 |
| P4 | VF | 2r | 2r | 2r | 2r | 2r | ◷ | 17 |
| P5 | ☽ | 2c | 2c | 2c | 2c | 2c | REC | 16 |
| P6 | AUTO | 2e | 2e | 2e | 2e | 2e | – | 15 |
| P7 | ○ | 2m | 2m | 2m | 2m | 2m | – | 14 |
| P8 | S2 | 2g | 2g | 2g | 2g | 2g | PRGM | 13 |
| P9 | – | 2f | 2f | 2f | 2f | 2f | AI | 12 |
| P10 | DOLBY NR | 2b | 2b | 2b | 2b | 2b | EDIT | 11 |
| P11 | – | 2k | 2k | 2k | 2k | 2k | – | 10 |
| P12 | B1 | 2h | 2h | 2h | 2h | 2h | – | 9 |
| P13 | POP | 2a | 2a | 2a | 2a | 2a | – | 8 |
| P14 | REC | – | col 2 | col1 (UP) | – | KHZ | – | 7 |
| P15 | B2 | – | ▷ | MONO | – | 5 | – | 6 |
| P16 | CLASSIC | – | dp | col1 (DOWN) | – | MHZ | – | 5 |
| P17 | B3 | ◁ | 1d | 1d | 1d | 1d | – | 4 |
| P18 | ROCK | – | 1e | 1e | 1e | 1e | – | 3 |
| P19 | B4 | AM | 1c | 1c | 1c | 1c | – | 2 |
| P20 | B5 | — | 1g | 1g | 1g | 1g | – | 1 |
| P21 | B6 | / | 1f | 1f | 1f | 1f | – | S1 |
| P22 | B7 | – | 1b | 1b | 1b | 1b | – | – |
| P23 | B8 | PM | 1a | 1a | 1a | 1a | – | – |
| P24 | – | – | – | – | – | (((o))) | – | – |

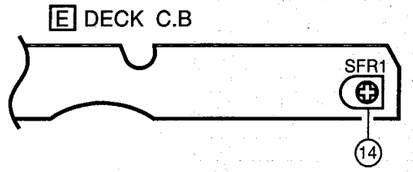
## PIN COLLECTION

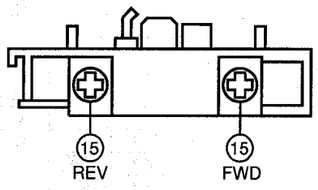
NOTE 1) F1, F2 —— Filament
2) NP ——— NO pin
3) NC ——— NO connection
4) DL ——— Datum Line
5) 1G ~ 11G —— Grid

| PIN NO. | 45 | 44 | 43 | 42 | 41 | 40 | 39 | 38 | 37 | 36 | 35 | 34 | 33 | 32 | 31 | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CONNECTION | F2 | F2 | NP | NP | 8G | 7G | 6G | 5G | 4G | 3G | 2G | 1G | P23 | P22 | NC | NC | NC | NC | NC | P22 | P21 | P20 | P19 | P18 | P17 | P16 | P15 | P14 | P13 | P12 | P11 | P10 | P9 | P8 | P7 | P6 | P5 | P4 | P3 | P2 | P1 | NP | NP | F1 | F1 |

# ADJUSTMENT – 1 <TUNER / DECK>






< TUNER SECTION >

1. Clock Frequency Adjustment
   Settings : • Test point : TP1 (CLK IC770 pin30)
   • Adjustment location : TC721
   Method : Set to MW 1710kHz (HE, HR, HK, LH, U), 1602kHz (EE,K,EZ) and adjust TC721 so that the test point becomes 2160kHz ± 0.01kHz (HE, HR, HK, LH, U), 2052kHz ± 0.01kHz(EE,K,EZ).

2. LW VT Adjustment <EE,K,EZ>
   Settings : • Test point : TP2
   • Ajustment location : L942
   Method : Set to LW 144kHz and adjust L942 so that the test point becomes 1.5V ± 0.05V.

3. SW VT Adjustment <HE, HR, HK>
   Settings : • Test point : TP2 (VT)
   • Ajustment location : L958
   Method : Set to SW 17.9MHz and adjust L942 so that the test point becomes 8.0V ± 0.05V.

4 MW VT Adjustment <HE, HR, HK>
   Settings : • Test point : TP2 (VT)
   • Ajustment location : L982
   Method : Set to MW 1710kHz and adjust L982 so that the test point becomes 8.5V ± 0.05V. Then set to MW 530kHz and check that the test point is more than 0.3V.

5. MW VT Check <LH, U, EE,EZ,K>
   Settings : • Test point : TP2 (VT)
   Method : Set to MW 1710kHz (LH, U), 1602kHz (EE,K,EZ) and check that the test point is 6.5V ± 1.0V (LH, U), 6.8V ± 1.0V (EE,K,EZ).

6. FM VT Adjustment
   Settings : • Test point : TP2
   Adjustment location : L807
   Method : Set to FM 87.5MHz and adjust L807 so that the test point becomes 2.9V ± 0.05V.

7. AM IF Adjustment
   Settings : • Test point : TP5, TP6
   L742 ..... 450kHz

8. MW Tracking Adjustment
   <HE, HR, HK>
   Settings : • Test point : TP5, TP6
   • Ajustment location :
   L982 ..... 600kHz
   TC941 ..... 1400kHz
   Method : Set up TC941 to center before adjustment. The level at 600kHz is adjusted to MAX by L982. Then the level at 1400kHz is adjusted to MAX by TC941.

   <LH, U, EE,K,EZ>
   Settings : • Test point : TP5, TP6
   • Ajustment location : L982
   Method : Set to MW 1000kHz (LH, U), 999kHz (EE,K,EZ) and adjust L982 so that the test point becomes maximum.

9. SW Tracking Adjustment <HE, HR, HK>
   Settings : • Test point : TP5, TP6
   • Adjustment location :
   L941 ..... 5.95MHz
   TC942 ..... 17.9MHz
   Method : Set up TC953 to center before adjustment. The level at 5.95MHz is adjusted to MAX by L941. Then the level at 17.9MHz is adjusted to MAX by TC942.

10. LW Tracking Adjustment <EE, K, EZ>
    Settings : • Test point : TP5, TP6
    • Adjustment location :
    L941 ..... 144kHz
    TC942 ..... 290kHz
    Method : Set up TC942 to center before adjustment. The level at 144kHz is adjusted to MAX by L941. Then the level at 290kHz is adjusted by TC942.

11. FM Tracking Adjustment
    Settings : • Test point : TP5, TP6
    L802,L804..... 87.5MHz
    L831(EE,K,EZ)
    L801,TC802..... 108MHz
    L803(EE,K,EZ)

12. DC Balance / Mono Distortion Adjustment
    Settings : • Test point : TP3 (IC 770 pin28)
    TP4 (IC 770 pin4)
    TP5, TP6 (Distortion)
    • Ajustment location : L741
    • Input level : 54dB
    Method : Set to FM 98.0MHz and adjust L741 so that the voltage between TP3 and TP4 becomes 0V ± 0.04V.
    Next, check that the distortion is less than 1.3%.

13. Auto Stop Level Adjustment
    Settings : • Test point : TP7
    • Adjustment location : SFR722
    • Input level : 23dB
    Method : Set to FM 98.0 MHz and adjust voltage low (about 0.01V) by SFR722. After that voltage

< DECK SECTION >

14. Tape Speed Adjustment
Settings : • Test tape : TTA–100
• Test point : TP8, TP9
• Adjustment location : SFR1
Method : Play back the test tape by DECK 2, on FWD PLAY (DECK 2) adjust for 3000Hz±5Hz and to 45Hz of the FWD value during the REV mode .

15. Head Azimuth Adjustment
Settings : • Test tape : TTA–310
• Test point : TP8, TP9
• Adjustment location : Head azimuth adjustment screw
Method : Play back the 10kHz signal of the test tape and adjust screw so that the output becomes maximum. Next, perform on each FWD PLAY and REV PLAY mode.

16. PB Frequency Response Check (DECK 1, DECK 2)
Settings : • Test tape : TTA–300
• Test point : TP8, TP9
Method : Play back the 315Hz and 10kHz signals of the test tape and check that the output ratio of the 10kHz signal is with respect to that of the 315Hz signal is ± 2dB.

17. REC/PB Frequency Response Adjustment
Settings : • Test tape : TTA–602
• Test point : TP8, TP9
• Input signal : 1kHz / 10kHz (LINE IN)
• Adjutment location : SFR451 (Lch) SFR452 (Rch)
Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at the TP8, TP9 becomes 21mV. Record and play back the 1kHz and 10kHz signals and adjust SFRs so that the output of the 10kHz signals becomes 0dB ± 1dB with respect to that of the 1kHz signal.

# PRACTICAL SERVICE FIGURE

<TUNER SECTION>

<FM SECTION>

| | |
|---|---|
| S/N 50dB Quieting sensitivity : | 35dB ± 5dB (87.5 / 98.0 / 108.0MHz) |
| Signal to noise ratio : | More than 65dB (98.0MHz) |
| Distortion : | Less than 1.3% (98.0MHz) |
| Stereo separation : | More than 25dB (98.0MHz) |
| Intermediate frequency : | 10.7MHz |

<AM(MW) SECTION>

| | |
|---|---|
| Sensitivity : (S/N 20 dB) | 58dB ± 6dB [at 600kHz (LH, U)] [at 603kHz (EXCEPT LU,U)] |
| | 56dB ± 6dB [at 1000 / 1410kHz (LH, U)] [at 999 / 1404kHz (EXCEPT LH U)] |
| Distortion : | Less than 1.5% [at 1000kHz (LH, U)] [at 999kHz (EXCEPT LH,U)] |
| Signal to noise ratio : | More than 36dB [at 1000kHz (LH,U)] [at 999kHz (EXCEPT LH,U)] |
| Intermediate frequency : | 450kHz |

<SW SECTION> (HE, HR, HK)

| | |
|---|---|
| Sensitivity : | 37 ~ 45dB (5.95MHz) |
| (S/N 20dB) | 30 ~ 38dB (12MHz, 17.9MHz) |
| Distortion : | Less than 1.5% (12MHz) |
| Signal to noise ratio: | More than 38dB (12MHz) |

<LW SECTION> (EE,K,EZ)

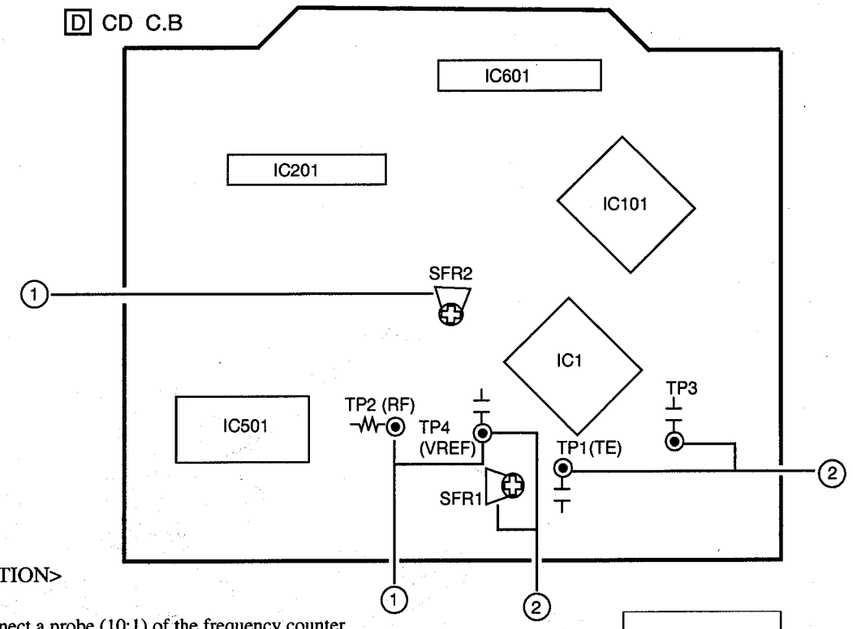
| | |
|---|---|
| Sensitivity : | Less than 69dB (144kHz) |
| (S/N 20dB) | Less than 66dB (198kHz, 290kHz) |
| Distortion : | Less than 1.5% (198kHz) |
| Signal to noise ratio : | More than 30dB (198kHz) |

<DECK SECTION>

| | |
|---|---|
| Tape speed : | 3000Hz ± 45Hz |
| Wow & flutter : | Less than 0.4% (R.M.S) |
| Take-up torque : | 30 ~ 55g-cm (FWD, REV) |
| F.F & REW torque : | 75 ~ 180g-cm |
| Back tension : | 2 ~ 7g-cm (FWD, REV) |
| PB Output level : | 2.8V ± 1.5dB (SP OUT 2V) |
| REC/PB Output level : | 2.0V – 3.5dB ~ 2.0V + 0.5dB (SP OUT 2V) |
| Distortion (REC/PB) : | Less than 2.0% (NORM, CrO2) |
| Noise level (PB) : | HE,HR,HK,LH : Less than 40mV / 200mV (DOLBY OFF VOL MAX) EE,K,EZ : Less than 120mV / 180mV (DOLBY OFF VOL MAX) U: Less than 110mV / 150mV (DOLBY OFF VOL MAX) |
| Noise level (REC/PB) : | Less than 35mV / 12mV (DOLBY OFF NORM SP OUT 2V) Less than 23mV / 8mV (DOLBY OFF CrO2 SP OUT 2V) |
| Crosstalk : | More than 60dB (1kHz, 0VU) |
| Channel separation : | More than 40dB (1kHz, 0VU) |
| Erasing ratio : | More than 60dB (at 125Hz) |
| Frequency response : | 63Hz ± 4dB ~ 12.5kHz ± 4dB |
| Test tape : | NORMAL : TTA–602 CrO2 : TTA–610 |



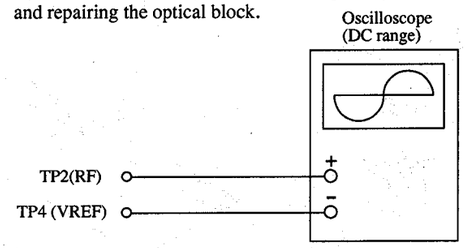
# ADJUSTMENT – 2 <CD>




<CD SECTION>

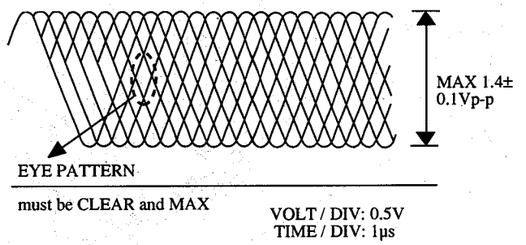
Note : Connect a probe (10:1) of the frequency counter or the oscilloscope to a test point.

1. Focus Bias Adjustment
Make the focus bias adjustment when replacing and repairing the optical block.

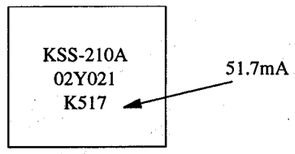



1) Connect an oscilloscope to the test points TP2 (RF) and TP4 (VREF).
2) Turn on the power switch.
3) Insert test disc TCD-782 (YEDS-18) and play back the second composition.
4) Adjust SFR2 so that RF signal of the test point TP2 (RF) is MAX and CLEARREST.

RF signal waveform

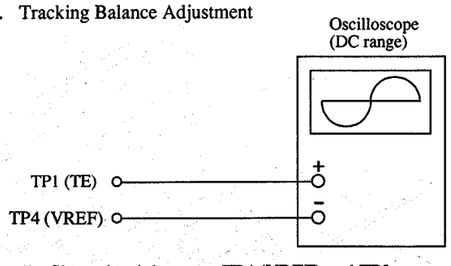



Note : The current of the laser signal can be checked with the voltages on both sides of R2 (10Ω). The difference for the specified value shown on the level must be within ± 6.0mA.

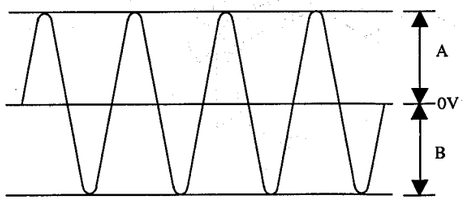



$$\text{Laser current Iop} = \frac{\text{Voltage across R2}}{10\Omega}$$

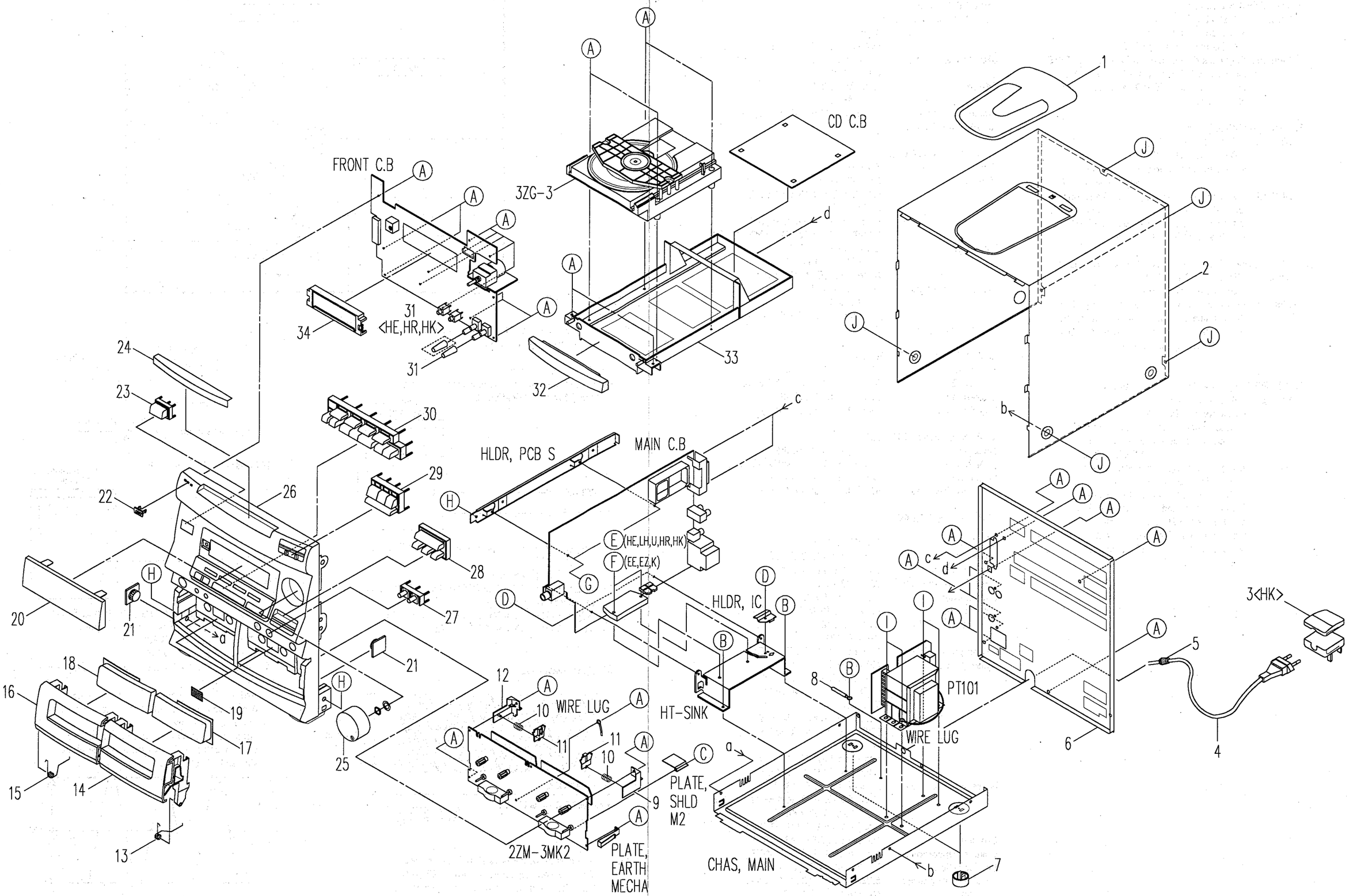
2. Tracking Balance Adjustment




1) Short circuit between TP4 (VREF) and TP3.
2) Connect an oscilloscope to the test points TP1 (TE ) and TP4 (VREF).
3) Turn on the power switch.
4) Insert test disc TCD-782 (YEDS-18) and press the PLAY button.
5) Adjust SFR1 so that the waveform on the oscilloscope is vertically symmetrical as shown in the figure below.
6) After the adjustment is completed, remove the connected lead wires from the test point TP3 and TP4(VREF).



# MECHANICAL EXPLODED VIEW 1 / 1

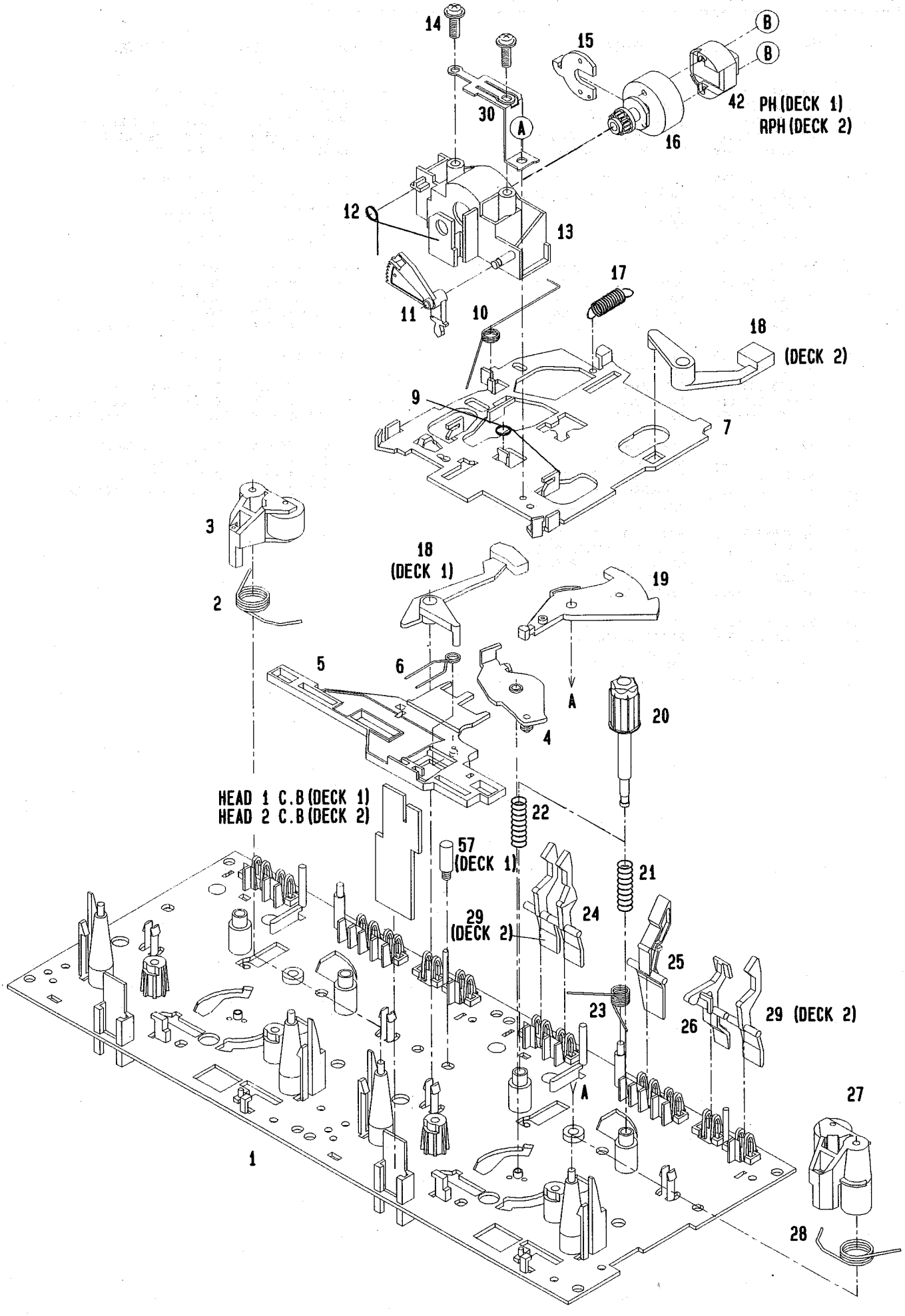


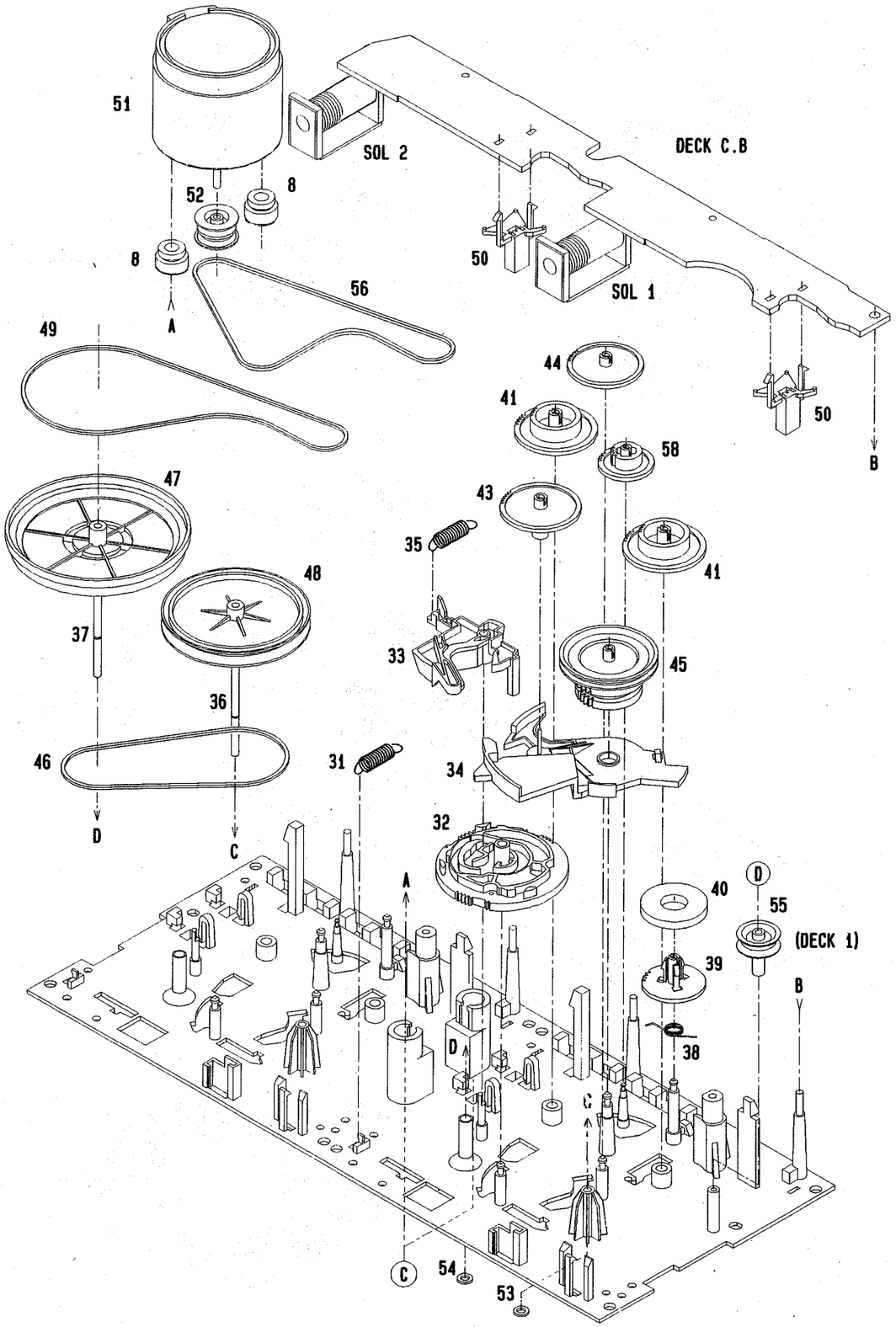
# MECHANICAL PARTS LIST 1 / 1

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

| REF. NO. | PART NO. | KANRI NO. | DESCRIPTION |
|---|---|---|---|
| 1 | 84-CE4-018-019 | | WINDOW,CD |
| 2 | 85-NE8-020-019 | | CAB,STEEL |
| ⚠ 3 | 87-099-811-018 | | PLUG,ADPTR CON V (K)<HK> |
| ⚠ 4 | 87-050-079-019 | | AC CORD ASSY,E<EXCEPT U,K> |
| ⚠ 4 | 87-050-053-019 | | AC CORD ASSY,U-2<U> |
| ⚠ 4 | 87-050-100-019 | | AC CROD ASSY,K3P<K> |
| 5 | 87-085-185-010 | | BUSHING,AC CORD E<EXCEPT U> |
| 5 | 87-085-189-010 | | BUSHING,CORD U<U> |
| 6 | 85-NE8-045-019 | | PANEL,REAR EEBNM<EE> |
| 6 | 85-NE8-002-019 | | PANEL,REAR HEJBNM<HE> |
| 6 | 85-NE8-046-019 | | PANEL,REAR EZBNM<EZ> |
| 6 | 85-NE8-048-019 | | PANEL,REAR HKJBNM<HK> |
| 6 | 85-NE8-032-019 | | PANEL,REAR HRJBNM<HR> |
| 6 | 85-NE8-047-019 | | PANEL,REAR KBNM<K> |
| 6 | 85-NE8-031-019 | | PANEL,REAR LHBNM<LH> |
| 6 | 85-NE8-033-019 | | PANEL,REAR UBNM<U> |
| 7 | 87-085-221-019 | | FOOT,H13.5 |
| 8 | 87-038-039-010 | | WIRE BINDER |
| 9 | 82-NF5-226-019 | | HLDR,LOCK 1N |
| 10 | 82-NF5-228-019 | | SPR-C,LOCK |
| 11 | 82-NF5-229-019 | | PLATE,LOCK |
| 12 | 82-NF5-227-019 | | HLDR,LOCK 2N |
| 13 | 82-NF5-219-019 | | SPR-T,EJECT 2 (SIN) |
| 14 | 85-NE8-004-019 | | BOX,CASS R<HE,LH,HR,HK> |
| 14 | 85-NE8-030-019 | | BOX,CASS RE<U,EE,EZ,K> |
| 15 | 82-NF5-218-019 | | SPR-T,EJECT 1 (SIN) |
| 16 | 85-NE8-003-019 | | BOX,CASS L<HE,LH,HR,HK> |
| 16 | 85-NE8-029-019 | | BOX,CASS LE<U,EE,EZ,K> |
| 17 | 85-NE8-016-019 | | WINDOW,CASS R |
| 18 | 85-NE8-015-019 | | WINDOW,CASS L |
| 19 | 81-532-080-019 | | LBL,CASS-COMPT |
| 20 | 85-NE8-013-019 | | WINDOW,DISPLAY |
| 21 | 87-063-165-019 | | OIL-DMPR 150 |
| 22 | 82-NE6-067-019 | | BADGE,AIWA 30N |
| 23 | 85-NE8-005-019 | | KEY,POWER |
| 24 | 85-NE8-014-019 | | WINDOW,CD |
| 25 | 85-NE8-012-019 | | KNOB,VOL |
| 26 | 85-NE8-001-019 | | CAB,FR HE<HE,HR,HK> |
| 26 | 85-NE8-024-019 | | CAB,FR E<EE,EZ,K> |
| 26 | 85-NE8-021-019 | | CAB,FR LH<LH> |
| 26 | 85-NE8-023-019 | | CAB,FR U<U> |
| 27 | 85-NE8-009-019 | | KEY,VF |
| 28 | 85-NE8-010-019 | | KEY,GEQ |
| 29 | 85-NE8-006-019 | | KEY,CD |
| 30 | 85-NE8-008-019 | | KEY,FN |
| 31 | 85-NE8-011-019 | | KNOB,MIC |
| 32 | 85-NE8-018-019 | | PANEL,TRAY |
| 33 | 85-NE8-210-019 | | HLDR,CD |
| 34 | 82-NF7-210-019 | | GUIDE FL |
| A | 87-067-703-019 | | BVT2+3-10 (W/O SLOT) |
| B | 87-067-688-019 | | BVTT+3-6 |
| C | 87-571-032-419 | | VIT+2-3 |
| D | 87-067-579-019 | | BVT2+3-8 W/O SLOT |
| E | 87-067-581-019 | | BVT2+3-15W/O SLT<HE,LH,HR,U,HK> |
| F | 87-067-698-019 | | BVT2+3-18 W/O SLOT<EE,EZ,K> |
| G | 87-078-084-019 | | BVTT+3-6 W,CONVEX |
| H | 87-591-094-419 | | QIT+3-6 GOLD |
| I | 87-078-019-019 | | S-SCREW,IT+4-6 |
| J | 87-067-641-019 | | UTT2+3-8 W/O SLOT BLK |

# TAPE MECHANISM EXPLODED VIEW 1 / 1



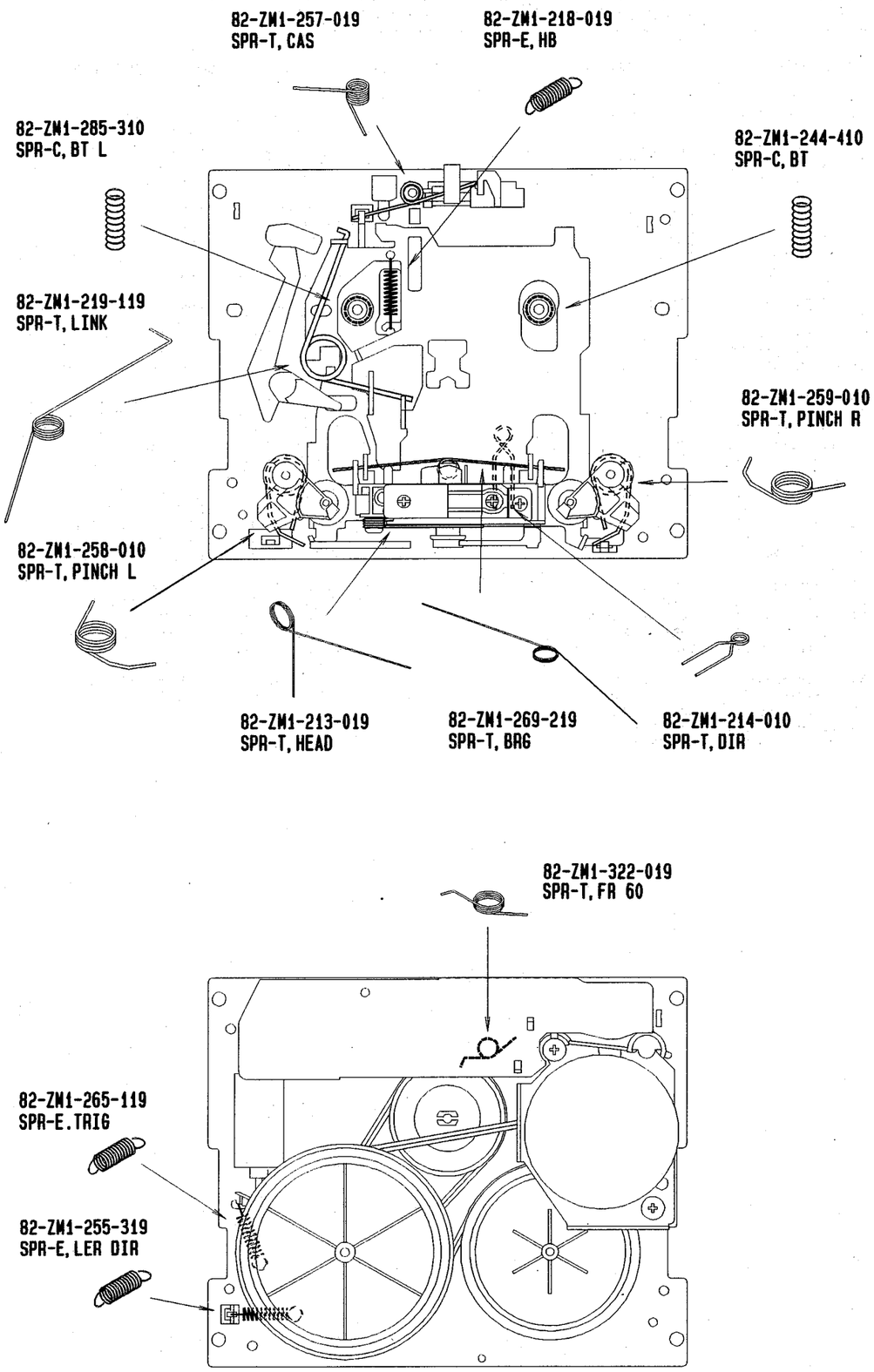



# TAPE MECHANISM PARTS LIST 1 / 1

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

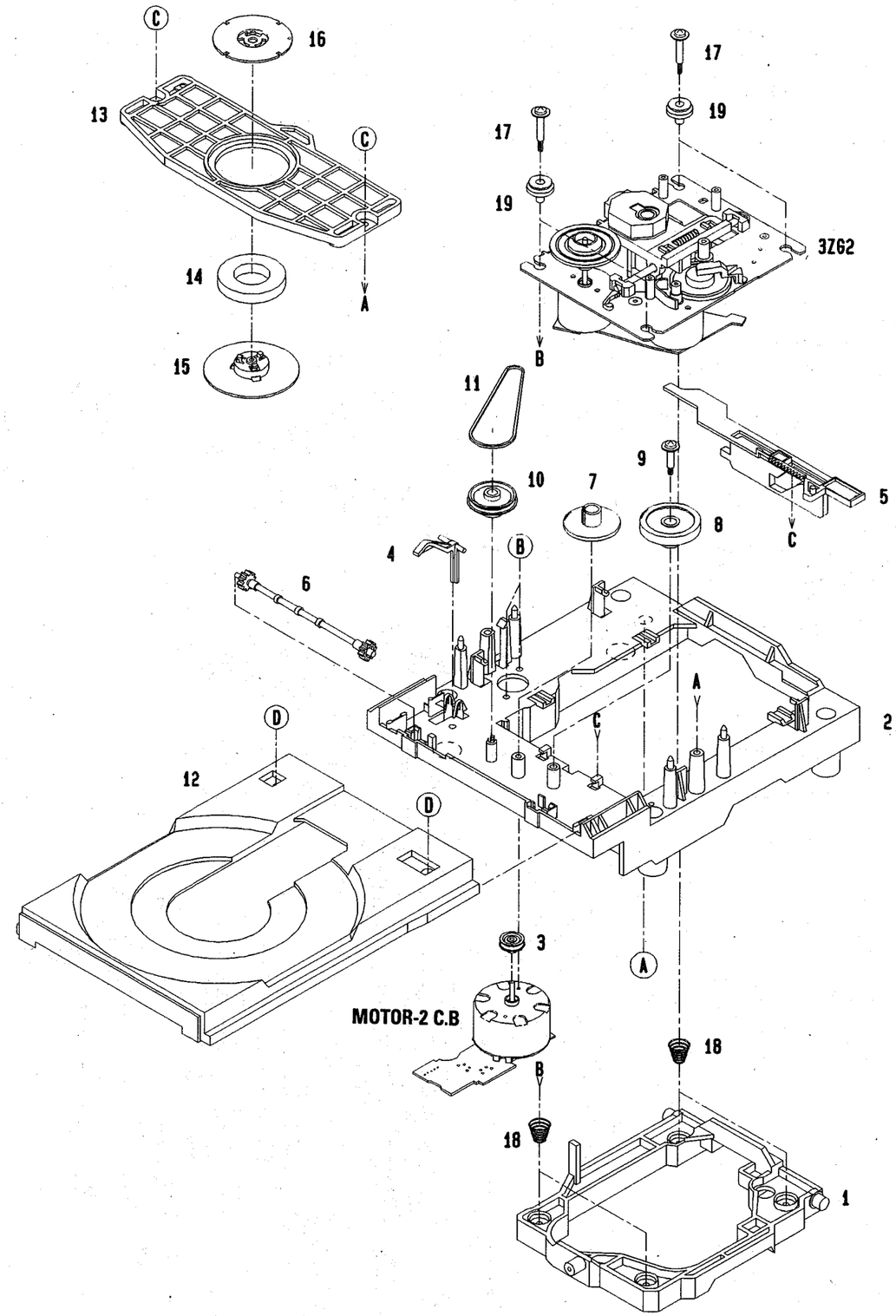
| REF. NO. | PART NO. | KANRI NO. | DESCRIPTION |
|---|---|---|---|
| 1 | 82-ZM3-301-019 | | CHAS ASSY,M2 |
| 2 | 82-ZM1-258-010 | | SPR-T,PINCH L |
| 3 | 82-ZM1-248-419 | | LVR ASSY,PINCH L |
| 4 | 82-ZM1-295-31K | | PLATE ASSY,LINK |
| 5 | 82-ZM1-266-11K | | LVR,DIR |
| 6 | 82-ZM1-214-010 | | SPR-T,DIR |
| 7 | 82-ZM1-206-61K | | CHAS,HEAD |
| 8 | 82-ZM3-307-019 | | CUSH-G,DIA3.7-8-3.2 |
| 9 | 82-ZM1-269-219 | | SPR-T,BRG |
| 10 | 82-ZM1-219-119 | | SPR-T,LINK |
| 11 | 82-ZM1-210-019 | | GEAR,H T |
| 12 | 82-ZM1-213-019 | | SPR-T,HEAD |
| 13 | 82-ZM1-207-519 | | GUIDE,TAPE |
| 14 | 82-ZM1-283-310 | | S-SCREW,AZIMUTH |
| 15 | 82-ZM1-314-119 | | PLATE,HEAD |
| 16 | 82-ZM1-208-019 | | HLDR,HEAD |
| 17 | 82-ZM1-218-019 | | SPR-E,HB |
| 18 | 82-ZM1-263-110 | | LVR,EJECT L (DECK 1) |
| 18 | 82-ZM1-264-010 | | LVR,EJECT R (DECK 2) |
| 19 | 82-ZM1-222-11K | | LVR,PLAY |
| 20 | 82-ZM1-217-319 | | REEL TABLE |
| 21 | 82-ZM1-244-410 | | SPR-C,BT |
| 22 | 82-ZM1-285-310 | | SPR-C,BT L |
| 23 | 82-ZM1-257-019 | | SPR-T,CAS |
| 24 | 82-ZM1-241-319 | | LVR,MC |
| 25 | 82-ZM1-242-019 | | LVR,CAS |
| 26 | 82-ZM1-243-019 | | LVR,STOP |
| 27 | 82-ZM1-253-419 | | LVR ASSY,PINCH R |
| 28 | 82-ZM1-259-010 | | SPR-T,PINCH R |
| 29 | 82-ZM1-240-11K | | LVR,REC (DECK 2) |
| 30 | 82-ZM1-298-010 | | SPR-P,EARTH |
| 31 | 82-ZM1-255-319 | | SPR-E,LVR DIR |
| 32 | 82-ZM3-305-01K | | GEAR,CAM M2 |
| 33 | 82-ZM1-227-21K | | LVR,TRIG |
| 34 | 82-ZM3-306-01K | | LVR,FR M2 |
| 35 | 82-ZM1-265-119 | | SPR-E,TRIG |
| 36 | 82-ZM1-313-019 | | CAPSTAN N 2-41.5 |
| 37 | 82-ZM1-312-019 | | CAPSTAN N 2.2-41.7 |
| 38 | 82-ZM1-322-019 | | SPR-T,FR60 |
| 39 | 82-ZM1-220-219 | | GEAR,IDLER |
| 40 | 82-ZM1-316-010 | | RING MAGNET 3 |
| 41 | 82-ZM1-216-21K | | GEAR,REEL |
| 42 | 87-046-398-019 | | HEAD,PH YK50P-BS409(PH) |
| 42 | 87-046-399-019 | | HEAD,RPH YK56R-BS409(RPH) |
| 43 | 82-ZM1-225-11K | | GEAR,FR |
| 44 | 82-ZM1-226-019 | | GEAR,REW |
| 45 | 82-ZM1-228-510 | | SLIP DISK ASSY |
| 46 | 82-ZM1-328-010 | | BELT FR2(DECK 1) |
| 46 | 82-ZM1-335-010 | | BELT FR2M(DECK 2) |
| 47 | 82-ZM1-238-61K | | FLY-WHL ASSY,R (DECK 2) |
| 47 | 82-ZM3-210-51K | | FLY-WHL ASSY,R2 (DECK 1) |
| 48 | 82-ZM1-235-31K | | FLY-WHL ASSY,L (DECK 2) |
| 48 | 82-ZM3-208-41K | | FLY-WHL ASSY,L2 (DECK 1) |
| 49 | 82-ZM3-313-019 | | BELT R10 |
| 50 | 82-ZM1-245-210 | | HLDR,IC |
| 51 | 87-045-347-019 | | MOT,SHU2L 70(M1) |
| 52 | 82-ZM3-202-019 | | PULLEY,MOT 2M |
| 53 | 82-ZM1-288-019 | | SH,1.63-3.2-0.5 SLT |
| 54 | 80-ZM6-243-019 | | SH,1.75-3.6-0.5 SLT |
| 55 | 82-ZM3-304-010 | | PULLEY,COUPLER (DECK 1) |
| 56 | 82-ZM3-312-019 | | BELT P10 |
| 57 | 82-ZM3-216-019 | | SHAFT,COUPLER N(DECK 1) |
| 58 | 82-ZM1-223-019 | | GEAR,PLAY |
| A | 82-ZM1-315-010 | | S-SCREW,GVIDE TAPE |
| B | 80-ZM6-207-019 | | V+1.6-7 |
| C | 82-ZM3-318-019 | | S-SCRW MOTOR M2 |
| D | 87-067-972-019 | | PW,1.05-3-0.25 SLT |

## SPRING APPLICATION POSITION






## CD MECHANISM EXPLODED VIEW 1 / 2

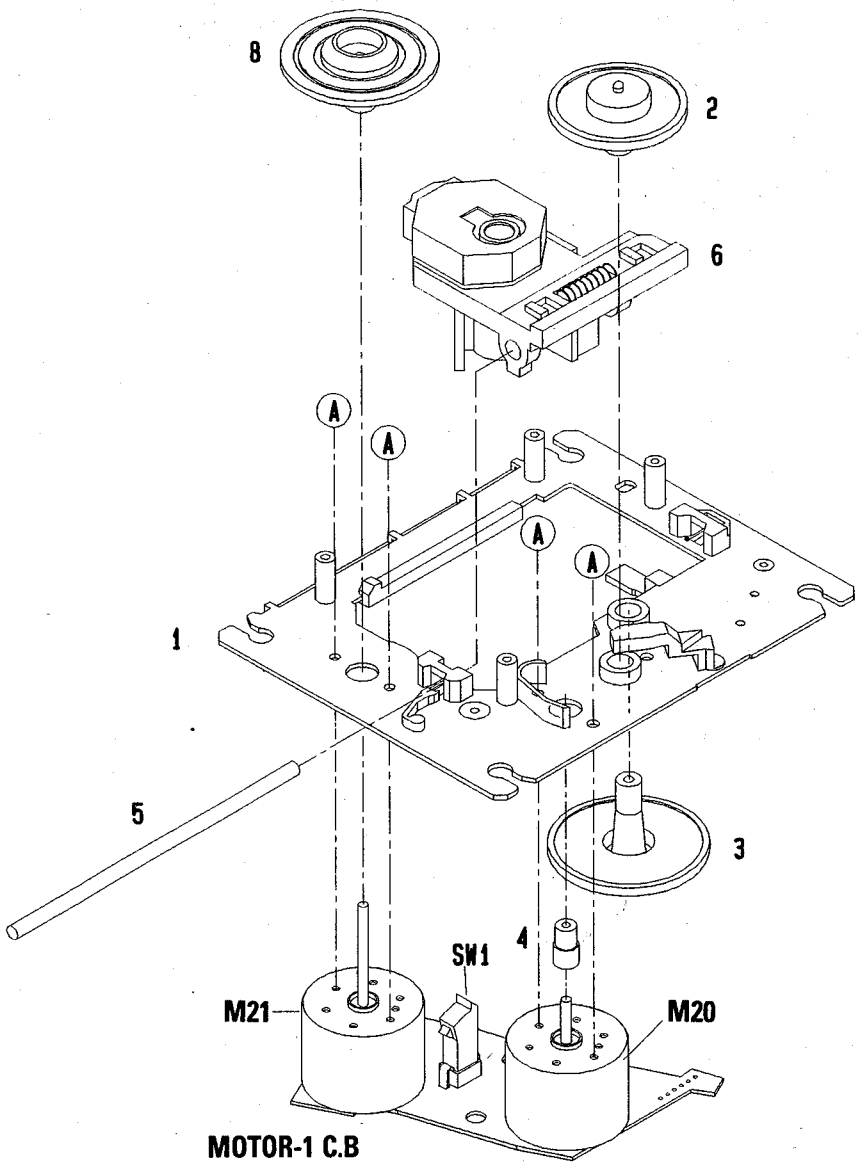


# CD MECHANISM PARTS LIST 1 / 2

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

| REF. NO. | PART NO. | KANRI NO. | DESCRIPTION |
|---|---|---|---|
| 1 | 83-ZG3-202-01K | | HLDR,MECH |
| 2 | 83-ZG3-228-21K | | CHAS,L6 |
| 3 | 83-ZG3-208-01K | | PULLEY,MOTOR |
| 4 | 83-ZG3-213-01K | | LVR,SW |
| 5 | 83-ZG3-209-01K | | CAM,SLIDE |
| 6 | 83-ZG3-207-01K | | GEAR,TRAY |
| 7 | 83-ZG3-204-01K | | GEAR,C |
| 8 | 83-ZG3-205-01K | | GEAR,D |
| 9 | 83-ZG3-217-019 | | S-SCREW,GEAR D |
| 10 | 83-ZG3-220-11K | | GEAR,PULLEY 2 |
| 11 | 83-ZG3-214-019 | | BELT,L |
| 12 | 83-ZG3-203-61K | | TRAY,CD |
| 13 | 83-ZG3-210-01K | | HLDR,CHUCK |
| 14 | 83-ZG3-602-010 | | RING,MAG |
| 15 | 83-ZG3-212-01K | | CAP,DISC |
| 16 | 83-ZG3-211-01K | | PLATE,DISC |
| 17 | 81-ZG1-254-019 | | S-SCEW,MECH HLDR |
| 18 | 83-ZG3-216-019 | | SPR-C,L |
| 19 | 83-ZG3-215-019 | | CUSH-G,MAIN |
| A | 87-067-945-119 | | VFT2+3-12(F10) |
| B | 87-251-071-119 | | U+2.6-4 |
| C | 87-512-074-219 | | VFT2+2.6-8 |
| D | 87-352-075-219 | | VT2+2.6-10 |

# CD MECHANISM EXPLODED VIEW 2 / 2



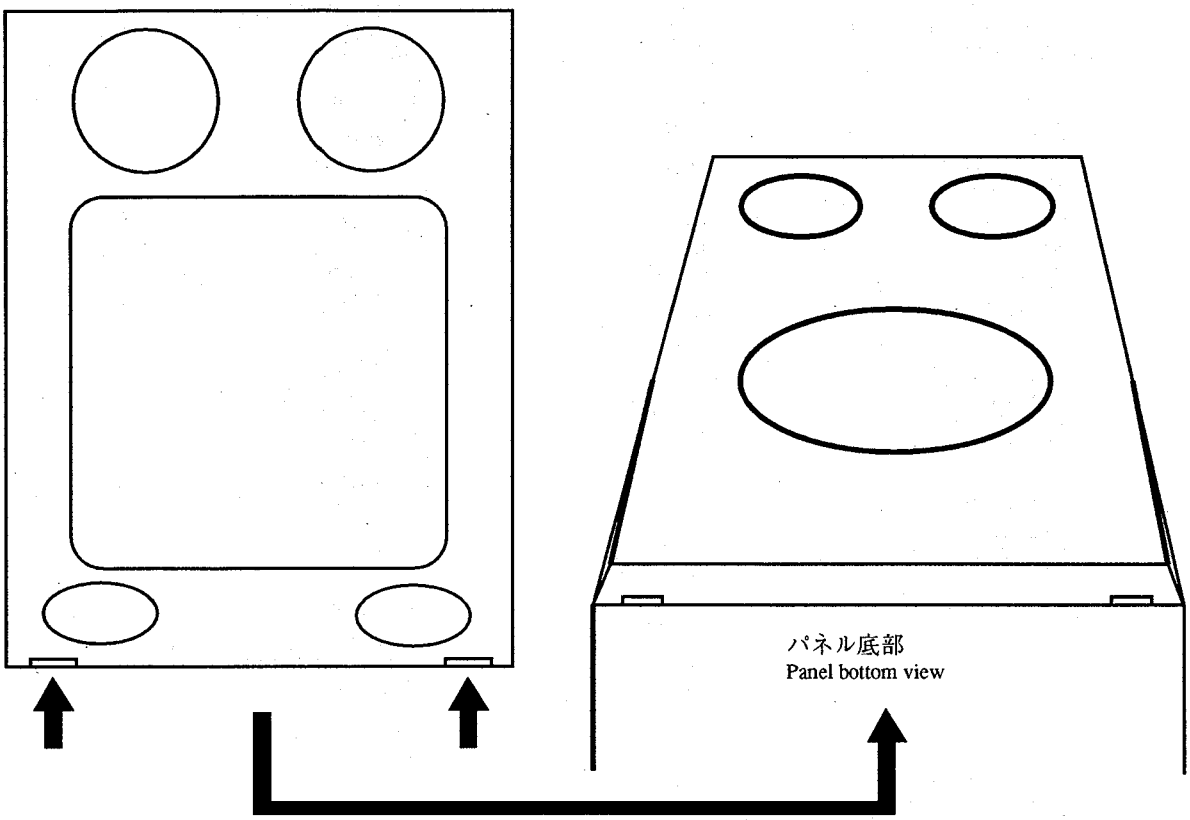

# CD MECHANISM PARTS LIST 2 / 2

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

| REF. NO. | PART NO. | KANRI NO. | DESCRIPTION |
|---|---|---|---|
| 1 | 83-ZG2-202-51K | | O-SERT S ASSY,S |
| 2 | 83-ZG2-204-419 | | GEAR,A |
| 3 | 83-ZG2-205-219 | | GEAR,B |
| 4 | 83-ZG2-220-01K | | GEAR MOTOR 2 |
| 5 | 83-ZG2-207-119 | | SHAFT,SLIDE |
| 6 | 87-070-109-019 | | KSS 212A,PICKUP UNIT |
| 8 | 83-ZG2-222-01K | | TURN TABLE,A5 |
| A | 87-261-032-219 | | SCREW V+2-3 |

## SPEAKER DISASSEMBLY INSTRUCTIONS

矢印の位置にマイナスドライバーを差し込んで、パネルをはずして、各々のスピーカー・ユニットのビスを取り、スピーカー・ユニットをはずしてください。
Insert a flat - bladed screwdriver into the position indicated by the arrows and remove the panel.
Remove the screws of each speaker unit and then remove the speaker units.




## SPEAKER PARTS LIST

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

| REF. NO. | PART NO. | KANRI NO. | DESCRIPTION |
|---|---|---|---|
| 1 | 85-NS7-007-019 | | GRILL FRAME ASSY |
| 2 | 85-NS6-602-019 | | SPEAKER WOOFER |
| 3 | 85-MS3-604-019 | | SPEAKER TWEETER |
| 4 | 82-MSE-610-019 | | CERAMIC |
| 5 | 83-NS8-009-019 | | DIA PORAGM |
| 6 | 83-096-614-019 | | SPEAKER CORD |
| A | 87-343-172-019 | | VT,+ 4-12 |
| B | 87-342-097-019 | | VT,+ 3-12 |

# REFERENCE NAME LIST

## ELECTRICAL SECTION

| DESCRIPTION | REFERENCE NAME |
|---|---|
| ANT | ANTENNAS |
| C- | CHIP |
| C-CAP | CAP, CHIP |
| C-CAP TN | CAP, CHIP TANTALUM |
| C-COIL | COIL, CHIP |
| C-DI | DIODE, CHIP |
| C-DIODE | DIODE, CHIP |
| C-FET | FET, CHIP |
| C-FOTR | FILTER, CHIP |
| C-JACK | JACK, CHIP |
| C-LED | LED, CHIP |
| C-RES | RES, CHIP |
| C-SFR | SFR, CHIP |
| C-SLIDE SW | SLIDE SWITCH, CHIP |
| C-SW | SWITCH, CHIP |
| C-TR | TRANSISTOR, CHIP |
| C-VR | VOLUME, CHIP |
| C-ZENER | ZENER, CHIP |
| CAP, CER | CAP, CERA-SOL |
| CAP, E | CAP, ELECT |
| CAP, M/F | CAP, FILM |
| CAP, TC | CAP, CERA-SOL |
| CAP, TC-U | CAP, CERA-SOL SS |
| CAP, TN | CAP, TANTALUM |
| CERA FIL | FILTER, CERAMIC |
| CF | FILTER, CERAMIC |
| DL | DELAY LINE |
| E/CAP | CAP, ELECT |
| FILT | FILTER |
| FLTR | FILTER |
| FUSE RES | RES, FUSE |
| MOT | MOTOR |
| P-DIODE | PHOTO DIODE |
| P-SNSR | PHOTO SENSER |
| P-TR | PHOTO TRANSISTOR |
| POLY VARI | VARIABLE CAPACITOR |
| PPCAP | CAP, PP |
| PT | POWER TRANSFORMER |
| PTR, RES | PTR, MELF |
| RC | REMOTE CONTROLLER |
| RES NF | RES, NON-FLAMMABLE |
| RESO | RESONATOR |
| SHLD | SHIELD |
| SOL | SOLENOID |
| SPKR | SPEAKER |
| SW, LVR | SWITCH, LEVER |
| SW, RTRY | SWITCH, ROTARY |
| SW, SL | SWITCH, SLIDE |
| TC CAP | CAP, CERA-SOL |
| THMS | THERMISTOR |
| TR | TRANSISTOR |
| TRIMER | CAP, TRIMER |
| TUN-CAP | VARIABLE CAPACITOR |
| VIB, CER | RESONATOR, CERAMIC |
| VIB, XTAL | RESONATOR, CRYSTAL |
| VR | VOLUME |
| ZENER | DIODE, ZENER |

## MECHANICAL SECTION

| DESCRIPTION | REFERENCE NAME |
|---|---|
| ADHESHIVE | SHEET ADHESHIVE |
| AZ | AZIMUTH |
| BAR-ANT | BAR-ANTENNA |
| BAT | BATTERY |
| BATT | BATTERY |
| BRG | BEARING |
| BTN | BUTTON |
| CAB | CABINET |
| CASS | CASSETTE |
| CHAS | CHASSIS |
| CLR | COLLAR |
| CONT | CONTROL |
| CRSR | CURSOR |
| CU | CUSHION |
| CUSH | CUSHION |
| DIR | DIRECTION |
| DUBB | DUBBING |
| FL | FRONT LOADING |
| FLY-WHL | FLYWHEEL |
| FR | FRONT |
| FUN | FUNCTION |
| G-CU | G-CUSHION |
| HDL | HANDOL |
| HIMERON | CLOTH |
| HINGE, BAT | HINGE, BATTERY |
| HLDR | HOLDER |
| HT-SINK | HEAT SINK |
| IB | INSTRUCTION BOOKLET |
| IDLE | IDLER |
| IND, L-R | INDICATOR, L-R |
| KEY, CONT | KEY, CONTROL |
| KEY, PRGM | KEY, PROGRAM |
| KNOB, SL | KNOB, SLIDE |
| LBL | LABEL |
| LID, BATT | LID, BATTERY |
| LID, CASS | LID, CASSETTE |
| LVR | LEVER |
| P-SP | P-SPRING |
| PANEL, CONT | PANEL, CONTROL |
| PANEL, FR | PANEL, FRONT |
| PRGM | PROGRAM |
| PULLY, LOAD MO | PULLY, LOAD MOTOR |
| RBN | RIBBON |
| S- | SPECIAL |
| SEG | SEGMENT |
| SH | SHEET |
| SHLD-SH | SHIELD-SHEET |
| SL | SLIDE |
| SP | SPRING |
| SP-SCREW | SPECIAL-SCREW |
| SPACER, BAT | SPACER, BATTERY |
| SPR | SPRING |
| SPR-P | P-SPRING |
| SPR-PC-PUSH | P-SPRING, C-PUSH |
| T-SP | T-SPRING |
| TERM | TERMINAL |
| TRIG | TRIGGER |
| TUN | TUNING |
| VOL | VOLUME |
| W. | WASHER |
| WHL | WHEEL |
| WORM-WHL | WORM-WHEEL |

| サービス技術ニュース | |
|---|---|
| 番号 | 連絡内容 |
| G— — | |
| G— — | |
| G— — | |

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